UNIVERSITY OF TARTU

Self-evaluation report for institutional accreditation

2022

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ABBREVIATIONS

A2020	The University of Tartu Strategic Plan for 2015–2020
A2025	Strategic Plan of the University of Tartu for 2021–2025
ACEEU	Accreditation Council for Entrepreneurial and Engaged Universities
CELSA	Central Europe Leuven Strategic Alliance
DHIS	document management information system
ECTS	European Credit Transfer and Accumulation System credit point
EFQM	European Foundation for Quality Management
EIK	Centre for Entrepreneurship and Innovation
EIT	European Institute of Innovation and Technology
EKKA	Estonian Quality Agency for Higher and Vocational Education
EMU	Estonian University of Life Sciences
ERC	European Research Council
ESI	Essential Science Indicators
ETAg	Estonian Research Council
ETIS	Estonian Research Information System
EU	European Union
FTE	full-time equivalent
GDP	gross domestic product
HEI	higher education institution
HV	Faculty of Arts and Humanities
ICT	information and communication technology
ISEP	International Student Exchange Programs
IT	information technology
LERU-CE7	partnership programme of the League of European Research Universities (LERU) and seven Central-European universities
LT	Faculty of Science and Technology
mEUR	million euros
MoER	Ministry of Education and Research
MOOC	massive open online course
MTÜ	non-profit organisation *(mittetulundusühing)*
MV	Faculty of Medicine
OSKA	a system of labour market monitoring and future skills forecasting
OÜ	private limited company *(osaühing)*
PRÕM	programme "Development of vocational and higher education in meeting labour market needs"
R&D	research and development
RDC	research, development and other creative activities
RPL	recognition of prior learning and professional experience
SA	foundation *(sihtasutus)*
SAIS	national admission information system
SER	self-evaluation report
SIS	Study Information System
SV	Faculty of Social Sciences
UT	University of Tartu
UTSU	University of Tartu Student Union
UTTV	University of Tartu video portal

I. INTRODUCTION

1. UNIVERSITY'S OPERATING ENVIRONMENT

The previous seven-year strategic planning period of the European Union (EU) and Estonia ended in 2020, so a number of draft strategies were prepared. Among others, the long-term development strategy "Estonia 2035" was compiled, which is also the basis for planning the EU's financial contributions to Estonia in the next period.

Among the strategies directly affecting the activities of the University of Tartu (UT), the Government of the Republic has approved the "Estonian Research and Development, Innovation and Entrepreneurship Strategy 2021–2035" and the "Youth Sector Strategy 2021–2035". The "Education Strategy 2035" and the "Estonian Language Development Plan 2035" are being drafted. The UT has significantly contributed to the development of all these strategies (see standard 12).

In recent years, the funding for research and development (R&D) has increased. While the EU average R&D expenditure in 2020 remained at the same level as in 2018, Estonia, along with Belgium and Croatia, was among the countries with the highest relative increase in R&D expenditure. In 2019, Estonia's R&D expenditure amounted to 453 million euros, which is 1.6% of gross domestic product (GDP). Financing R&D from the state and local budgets remained at the level of 2018, but private expenditure on R&D increased by 53.2% or 85.7 million euros. The EU average R&D expenditure amounted to 2.1% of GDP in 2019. In the negotiations with the state led by the UT, an agreement has been reached that as of 2021, public R&D funding will reach 1% of GDP for the first time. As a result, the volume of baseline research funding and project-based research grants will increase. However, since 2012, the share of higher education funding in GDP has decreased (1.4% in 2012, 1.1% in 2021), which is a direct threat to the quality of higher education. The UT is therefore working together with other Estonian higher education institutions (HEIs) to reach a political agreement to increase higher education funding to 1.5% of GDP and to ensure the associated funding of research and teaching.

2. UNIVERSITY'S ROLE IN SOCIETY

The UT is a public university operating under the University of Tartu Act[1], Higher Education Act, Organisation of Research and Development Act and its statutes and in the framework created by other legislation. The UT is the university with the most members and the largest volume of teaching, research and development activities in Estonia, at the same time belonging to 1% of the world's most cited universities and research institutions in 12 fields of research. More than half of doctoral theses in Estonia are defended at the UT and more than half of scientific publications in Estonia are authored by UT researchers.

The UT is one of the oldest universities in Northern and Eastern Europe and was founded in 1632 by King Gustavus Adolphus of Sweden. Under the Swedish rule, Academia Dorpatensis had four faculties: philosophy, law, theology and medicine. During the university's 390 years, teaching has been conducted in Latin, German, Russian and several other languages. On 1 December 1919, the Estonian-language University of Tartu of the Republic of Estonia was opened.

According to the University of Tartu Act, the mission of the UT is to advance science and culture, provide the possibilities for the acquisition of higher education based on the development of science and technology on the three levels of higher education in the field of the humanities, social, medical and natural science and to provide public services based on teaching, research and other creative activities.

As Estonia's national university, the UT advances the sciences investigating Estonia and its people for the purpose of preservation and development of the Estonian language and culture, and education in Estonian, preserves national cultural heritage and provides the related services to the public. For the performance of this function, the UT preserves and develops the buildings belonging into cultural heritage as well as the collections and archives containing works of scientific, artistic and historical value.

With its main activity, the UT supports the sustainable development of society, by creating new possibilities for that in international cooperation and by helping students become responsible citizens who are able to demonstrate initiative.

The scope and good quality of the UT's activities are proven by its positions in international university rankings. In 2018, the UT was said to be the best research-intensive university in New Europe in the Times Higher Education World University Rankings, and, in 2021, to be the second best university in Emerging Europe and Central Asia in the QS World University Rankings.

3. STRUCTURE AND GOVERNANCE

The highest decision-making body of the UT is the council, who is responsible for the UT's economic activities and long-term development, approves the UT's statutes and adopts the strategic plan and budget. The senate is the UT's

[1] *Where no English translation is available, a link to material in Estonian is given.*

academic decision-making body, who is responsible for teaching and research and development work at the UT and ensures the high quality of work in those areas.

The rector manages the everyday activities of the UT, is responsible for the lawful and expedient use of the university's assets and implements the highest administrative and disciplinary authority in the university within the rector's competence, following the decisions of the council and the senate. Based on the Rules and Principles of the Work of Rector's Office, the rector forms the Rector's Office, determining its members and their fields of responsibility.

The UT's academic structure consists of institutes and colleges of four faculties and university's institutions not affiliated to any faculty. The senate decides on the establishment, reorganisation and termination of academic units. The provision of support services required for the teaching, research and development activities as well as for other creative activities by the relevant support units is decided by the rector. Members from outside the UT and students are also involved in the UT's governance (see figure 1).

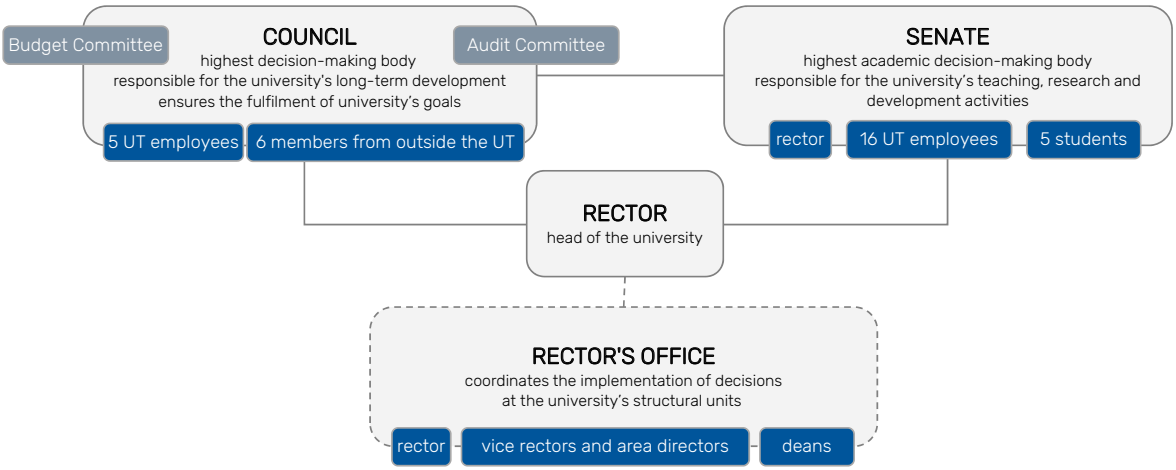

Figure 1. UT's governance in 2021

According to the University of Tartu Act, the UT has a library, botanical garden, museums and Youth Academy for the provision of public services. For the development of sports activities of the UT members and for other sports promotion

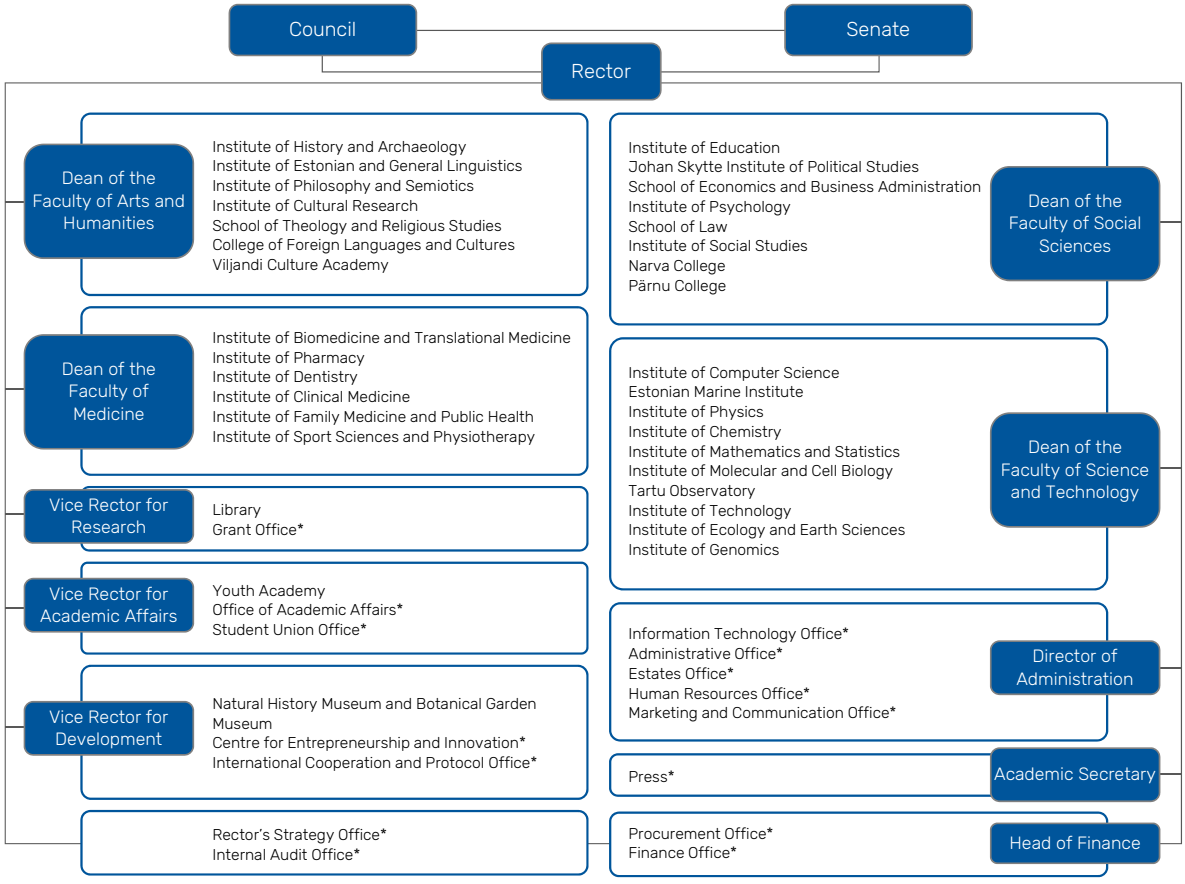

Figure 2. UT structure in 2021 * *Support units*

in the public interest, the UT's sports club MTÜ Tartu Ülikooli Akadeemiline Spordiklubi has been established. The activities of UT's culture and hobby societies are coordinated by MTÜ Üliõpilasmaja. In cooperation with the City of Tartu and the state, Tartu University Hospital (SA Tartu Ülikooli Kliinikum) was established in 1998 and, for the promotion of knowledge-based worldview, the research centre SA Teaduskeskus Ahhaa was established in 2004. The UT also has 11 student residences with 3,390 places, managed by Tartu Üliõpilasküla.

Based on the objective of the national research and development and innovation strategy (2014–2020) to consolidate the network of Estonian higher education and research institutions, the UT made a proposal to several institutions to join the university. After successful negotiations, national research and development institutions Estonian Biocentre and Tartu Observatory became part of the UT on 1 January 2018.

The broad structure of the UT is shown on figure 2.

4. CONSOLIDATED DATA ABOUT THE UNIVERSITY

The analysis of key figures presented in table 1 is linked to the relevant evaluation standard.

Table 1. Key figures

EMPLOYEES	**2016**	**2017**	**2018***	**2019**	**2020**
Number of employees	3,447	3,435	3,602	3,635	3,767
Number of employees (FTE)	2,825	2,805	2,935	2,957	3,055
incl. academic staff	1,402	1,432	1,517	1,518	1,604
incl. support staff	1423	1,373	1,417	1,440	1,450
Number of academic staff with PhD (FTE)	1,023	1,049	1,127	1,158	1,195
percentage of all academic staff	73%	73%	74%	76%	75%
Number of professors (FTE)	172	170	179	186	186
incl. female professors	24%	23%	23%	26%	26%
Number of international academic staff (FTE)	119	143	187	211	248
percentage of all academic staff	8.4%	10.0%	12.3%	13.9%	15.5%
STUDENTS					
Number of students	12,970	12,896	13,169	13,395	13,641
at the first level of higher education	60.6%	60.8%	60.4%	60.6%	60.6%
in master's studies	29.7%	29.9%	30.6%	30.9%	31.1%
in doctoral studies	9.7%	9.3%	9.0%	8.6%	8.3%
Number of students older than 30	3,380	3,473	3,693	3,815	4,045
percentage of all students	26%	27%	28%	28%	30%
Number of international students	980	1,195	1,457	1,660	1,678
percentage of all students	7.6%	9.3%	11.1%	12.4%	12.3%
Number of graduates	2,871	2,625	2,630	2,715	2,778
incl. doctoral graduates	120	138	122	129	118
CURRICULA					
Number of curricula under which new students started studying	159	162	161	159	159
incl. joint curricula	4	5	4	3	3
incl. English-taught curricula of the first and second level of higher education	21	26	26	30	29
Number of curricula with students enrolled	207	213	198	197	188
CONTINUING EDUCATION					
Number of learners			39,034	36,607	40,493
Number of courses			1,334	1,307	1,216
RESEARCH PUBLICATIONS					
Number of research publications	2,669	2,512	2,374	2,834	2,813
incl. high-level publications	1,902	1,709	1,709	1,983	1,995
incl. ETIS category 1.1 articles	1,353	1,231	1,259	1,480	1,472
FINANCES					
Operating revenue (in thousand euros)	137,989	153,817	191,087	204,793	204,140
Operating expense (in thousand euros)	147,306	162,522	184,022	193,421	200,611

** On 1 January 2018, two national research and development institutions joined the UT.*

In 2020, there were 33% fewer students in Estonia than in 2011; at the UT, the decrease was 24% in the same period.

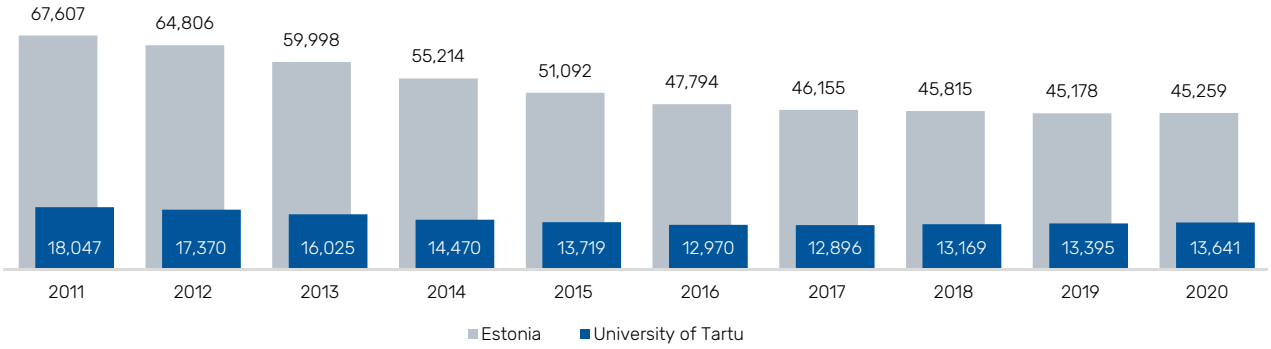

Figure 3. Number of students in Estonia and the UT 2011–2020

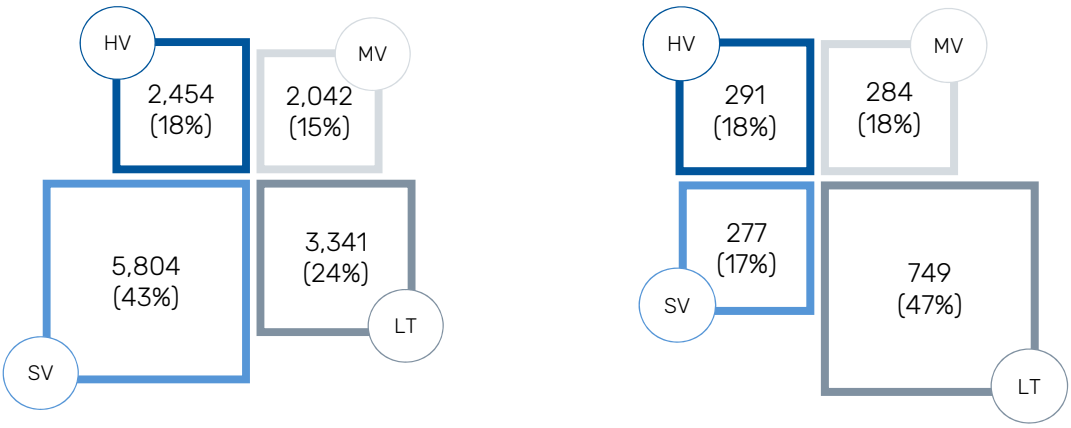

Figure 4. Number of students (on the left) and academic staff (on the right) as FTE and their distribution by faculties in 2020

5. DRAFTING OF THE SELF-EVALUATION REPORT

The drafting of the self-evaluation report started at the beginning of 2021, when standard-specific working groups were formed, the employee(s) responsible for each standard were appointed and the schedule was agreed upon. The working groups formed a network and, depending on the specific topic, involved people from both academic and support units as well as students in their work. About 80 people were directly involved with the drafting of the report and the process was led by the quality manager. Discussions were held, the background materials were shared and the report was written in the collaboration platform MS Teams. Seminars and discussions took place with the representatives of faculties, the University of Tartu Student Union (UTSU) and support units; the draft report was discussed by the senate and council. The analysis of curricula was based on the results of the regular internal evaluation of teaching carried out in 2021. The more detailed schedule and activity plan is shown in table 2.

Table 2. Schedule and activity plan of self-evaluation

Time	Activity
January 2021	Preparing the schedule and initial structure of the self-evaluation report (SER); introducing them to the heads of support units and area directors; division of work
February–March 2021	Selection of curricula to be evaluated; training on self-evaluation by the Estonian Quality Agency For Higher And Vocational Education (EKKA) on 18 March
February 2021	Informing the university family of the process of institutional accreditation (intranet, newsletter)
February–May 2021	Compiling the first version of the SER by standards and subsections
10 June 2021	Self-evaluation seminar
June 2021	Including the feedback received at the seminar in the SER
July 2021	Summer holiday
August–October 2021	Discussion and approval of the SER at the Rector's Office, faculty councils and the UTSU
October 2021	Analysis of proposals received from the discussion and approval process and updating the SER; communication on the SER and collecting feedback on the intranet
14 October 2021	Seminar for programme directors on the topic of internal evaluation of curricula
1 November 2021	Approval of the SER at the joint session of the council and the senate
November–December 2021	Translation, language editing and design of the SER
January 2022	Adding the results of the internal evaluation of curricula to the SER
20 January 2022	Submission of the SER to EKKA

II. MAIN STANDARD-RELATED CHANGES ARISING FROM THE RECOMMENDATIONS OF PREVIOUS INSTITUTIONAL ACCREDITATION

Table 3. Recommendations presented in the assessment report in 2015 and the related activities implemented

No.	Recommendations of the assessment report	Activities implemented
	Organisational management and performance	
1.	The university should implement fairly, consistently and without delay its proposed system of professional review.	Since 2019, all academic staff are evaluated. See standard 6.
2.	The university should ensure that annual staff performance appraisal is carried out with all employees.	The objectives and principles of performance management, incl. the obligation to carry out performance appraisals with staff, are emphasised in the performance appraisals between the rector and deans as well as between the deans and heads of institutes. Appraisals take place regularly and are the basis for managers' performance pay. Training on conducting performance appraisals takes place regularly.
3.	The university should give consideration to whether the gender pay gap can be reduced further.	The UT consistently pays attention to the gender pay gap. The main reason for the gender pay gap lies in the structural difference: in Estonia, the proportion of women is higher in the lower-paid sectors (education, humanities and arts) and lower positions of the academic career (lecturer, teacher, assistant). See standard 2.
4.	The university should provide clear and accessible guidance on ethical behaviour.	See standard 4.
5.	The university might consider increasing the financing of its development activities further, to cope with the changing terms of EU Structural Fund financing.	On 1 January 2016, the Statutes of the Development Fund took effect. The goal of the UT development fund is to support the implementation of the UT strategy, primarily cross-faculty development activities. See standard 2.
	Teaching and learning	
6.	Increasing the number of English-taught curricula – in addition to or replacing Estonian-taught curricula – is critical for attracting international students and increasing the international competitiveness of Estonian students.	In 2020/2021, foreign-language curricula made up 23% of all curricula of the first and second level of studies. From 2016 to 2020, the share of foreign-language curricula increased the most in master's studies: by 35%. See standard 5.
7.	The university should make the monitoring of students' academic progress (both credit accumulation and grade achievement) consistent across the faculties so that both students at risk of failure and those performing exceptionally well can be identified and supported early on.	See standard 10.
8.	The university should encourage a greater involvement of students with the careers service.	As a result of the reorganisation of support services, since 2017, the Counselling Centre operates under the Office of Academic Affairs, offering study-related, career and psychological counselling to students. When counselling student candidates regarding their choice of specialisation, the centre cooperates with Estonian Unemployment Insurance Fund. See standard 10.
9.	The university should concentrate its efforts on increasing international student mobility in both directions.	To improve the provision of mobility support services, the Study Abroad Centre has been created, which offers the participants in learning mobility more support on visas and residence permits. Also, the mobility window has been included in curricula. See standard 5.
10.	The university should renew its efforts to identify and support students with learning disabilities, capitalising on international best practice in this area.	See standard 10.
	Research, development and/or other creative activity	
11.	The duality contained in the UT's mission – an "internationally recognised research university" and a "national university responsible for the continuity of Estonian intellectuals and language and culture" – may hinder the realisation of the university's vision of a "rapidly developing international research university", as it requires a focused approach to the choice of areas.	As a comprehensive national university, the UT cannot focus on a limited number of research areas. The strategic plan A2025 reads: "The different roles of the university in achieving its mission must not be contrasted. The university will be the universitas only if it covers a broad spectrum of specialisations and acts as a national university, an international university as well as a developer of the economy and society. The university enables everyone to discover and realise their potential.".
12.	Potential risks of project-based (and thus unevenly distributed) research funding to the academic cohesion of the university should be mitigated.	The risks related to project-based funding have been mitigated by the governance and structural reform carried out at the university, as well as by the increase in the amount of public baseline funding of R&D institutions and by the so-called bridging fund financed by the development fund to compensate for the decrease in project-based revenue. See standard 2 and standard 11.
13.	The university should systematically monitor the progress of doctoral students and create as favourable conditions as possible to help them complete their studies within the standard period of study.	The procedure for the progress reviews of doctoral students has been improved. See standard 9.
	Serving society	
14.	To motivate teaching staff to participate in social and public activities and collect input for performance appraisals, the university would benefit from a respective monitoring system.	One part of the evaluation system implemented in 2017 is the assessment of academic employees' contribution to society. See standard 6 and standard 12.

III. SELF-EVALUATION ACROSS STANDARDS

1. STRATEGIC MANAGEMENT

Standard. Planning of the development of the HEI is purposeful and systematic, and various stakeholders are involved. The HEI regularly evaluates the achievement of its stated objectives and the impact of its activities.

1.1. Setting objectives for the university

The UT's objectives are in line with national priorities and the expectations of society. To prepare its strategic plan for 2021–2025 (A2025), the university used the materials of the national long-term development strategy "Estonia 2035" and the global Sustainable Development Goals as the basis. The national expectations and the UT's development objectives are periodically specified in the administrative contract made between the Ministry of Education and Research (MoER) and the UT (see standard 2).

In the dialogue with the government, the UT is an active partner in developing and implementing strategies and reform agendas in all spheres of its academic competence (see standard 12). Employees' participation in public advisory and decision-making bodies is appreciated also in the course of evaluation of academic staff (see standard 6).

From 2015 to 2020, the activities of the UT were guided by the strategic plan A2020 and the faculties' strategic plans and the key performance indicators, which specified the objectives of the strategic plan. The focus of A2020 was on developing science-based, high-quality and practical education, providing entrepreneurship education and developing entrepreneurship. Every year, the rector approved the UT's action plan in five lines of action: studies and teaching, research and development, development of entrepreneurship, institutional development, Estonian language and culture and national cultural assets. Eighteen key performance indicators were agreed upon in 2016 to monitor and evaluate the development. In 2016, the faculties' strategic plans were prepared based on the objectives and structure of A2020.

Table 4. Key performance indicators in A2020

Key performance indicator	Baseline (2014)	2015	2016	2017	2018	2019	2020	Target 2020
ENTREPRENEURIAL UNIVERSITY								
International research university								
Number of high-level research publications per academic staff member	1.3	1.3	1.4	1.2	1.1	1.3	1.2	> 1.3
Percentage of publications among the world's top 10% most cited research publications	13%	14%	13%	14%	15%	16%	17%	> 12%
Percentage of revenue from R&D not funded from national funding programmes in the total R&D revenue	26%	32%	34%	30%	28%	38%	38%	> 32%
University of lifelong learning								
Share of students admitted to the first level of higher education at the UT in the total number of students admitted to the first level of higher education in Estonian HEIs	21%	23%	24%	26%	27%	28%	27%	≥ 23%
Number of continuing education learners	32,464	37,160	44,799	47,815	39,034*	36,607*	40,493*	≥ 35,000
Percentage of completed entrepreneurship courses in the total volume of studies	–	–	2.6%	0.8%	0.8%	0.9%	1.0%	5%
Students' satisfaction with teaching and courses	4.1	4.1	4.1	4.13	4.2	–*	–*	≥ 4.0
Interruption rate at the first and second level of higher education	16%	15%	17%	16%	15%	14%	11%	≤ 15%
Percentage of doctoral graduates in the number of students admitted four years (standard period of study) ago	43%	41%	63%	77%	73%	75%	67%	50%
Percentage of English-taught curricula at the first and second level of higher education	10%	14%	17%	20%	20%	24%	23%	25%
Percentage of international students	5%	6%	8%	9%	11%	12%	12%	12%
Developing organisation								
Percentage of international research and teaching staff	9%	8%	8%	9%	12%	13%	15%	≥ 10%
Percentage of academic staff who actively participated in teaching-related development activities	16%	15%	17%	14%	23%	23%	13%	15%
Income per academic staff member	85,592	96,807	86,809	86,608	101,979	111,241	112,602	123,000
Percentage of structural units in good or satisfactory financial standing	90%	93%	72%	81%	81%	83%	98%	100%
Employee satisfaction	93%	93%	94%	93%	92%	91%	94%	≥ 93%

NATIONAL UNIVERSITY								
Social impact								
Master's graduates' satisfaction with their competitiveness in the labour market	90%**	88%	N/A	N/A	N/A	N/A	88%	90%
Assessment of UT entrepreneurship	8.6	8.7	8.9	7.7*	8*	8.1*	8*	≥ 9.0

** Methods changed during the term of the strategic plan A2020.*

*** Data from 2011.*

During the preparation of A2020, an important activity was the formulation of the university's core values and the mission guided by them. It was based on a study of employees' core values, a university-wide survey and focus groups interviews (with employees, students, and alumni). As a result of implementing A2020, also the UT's good practices were prepared (see standard 4).

A2020 was drawn up at the same time as the national strategies aimed at implementing the objectives of the new financial period of the EU were prepared; so more than €42m of structural fund assets were allocated to support the implementation of the UT's five-year action plan (2016–2020) from the ASTRA institutional development programme for R&D institutions and HEIs. Over the two consecutive strategic planning periods, the UT has been responsible for using almost 40% of the structural fund instruments intended for higher education and R&D.

The setting of strategic objectives and the implementation of the action plan are connected with the budget process. To implement the strategic plan and, primarily, support cross-faculty development, the UT has established the development fund which is at the disposal of the rector. The resources of the fund are distributed based on the relevance of an initiative to the UT's strategic plan, the impact of the planned activities, and the feasibility of the budget, action plan and schedule. Faculties receive performance incentives based on the fulfilment of target key performance indicators (see standard 2).

To support performance-oriented management, digital dashboards have been created. The statistics dashboard with indicators characterising UT's core activities and assets is publicly available online. The university council evaluates the implementation of the strategic plan once a year, at the same time as the annual report is approved. Among other issues, the report gives an overview of the implementation of tasks agreed in the contract made between the university and the MoER for the allocation of activity support.

As in the case of previous strategic plans, the entire university community was involved in the preparation of A2025. The rector formed a strategic planning committee, which included representatives of various governance levels and students and support units. To prepare A2025, suggestions were collected on the website and more thematic public workshops were organised than in the past, with external experts involved. Live webcasts were made from the workshops and the video recordings are available. After the draft strategic plan was completed, the UT organised the traditional Strategy Conference, where the trends of research and higher education at the UT and in Estonia as a whole were discussed.

Table 5. Key performance indicators in A2025

Indicator	Baseline 2020	Target 2025
International national university		
Number of graduates from teacher-training curricula	276	350
Percentage of international employees taking Estonian language courses	29%	45%
Percentage of international students taking Estonian language courses	28%	75%
Percentage of international graduates	15%	13–15%
Percentage of international academic employees*	12%	15–20%
Percentage of students participating in learning mobility among graduates	12.7%	18%
Education		
Dropout rate	9.5%	< 9%
Percentage of academic employees who actively participated in teaching-related development activities*	41%	50%
Students' satisfaction with the teaching of courses*	87%	95%
Number of continuing education learners	40,493	43,000
Percentage of newly admitted students with outstanding study results	57%	60%
Graduation rate of doctoral studies	35%	50%
Research		
Percentage of publications among the world's top 10% most cited research publications	17.1%	17–20%
Volume of international research funding (mEUR)	12.8	17.8
Volume of business contracts (mEUR)	6.83	8
Number of university's new spin-offs in a year	3	5

Organisation		
Income per academic staff member €*	124,158	150,000
Employee satisfaction*	66%	70%
Income from teaching per student €	5,662	6,500

** Calculation method is different compared to the key performance indicators of A2020*

The core values formulated at the time of preparing the previous strategic plan were considered to be up to date when preparing A2025. A2025 emphasises the importance of top-level research for developing evidence-based solutions to global problems and issues faced by Estonian society. Like earlier, when implementing A2025, the university focuses not only on its main activities (higher education and research) but also on objectives related to service to society, supporting the evidence-based governance of the country and the development of entrepreneurship, innovation and creativity. An important new theme in the development of the organisation is the integration of sustainable development issues into the UT's activities, incl. developing a digital working and learning environment, reducing the energy consumption of buildings, promoting a sustainable development mindset among its members and being an advocate of sustainable development in society. This process is supported by participation in the ENLIGHT network of nine European universities. Relying on their knowledge and experience, a common sustainable development declaration is prepared. For international collaboration, see standard 5.

The UT council has adopted the UT's Financial Strategy until 2025, and the UT's Spatial Development Strategy until 2025, the Language and Internationalisation Principles and the Strategy for the Involvement of Private Funds as subdocuments of A2025.

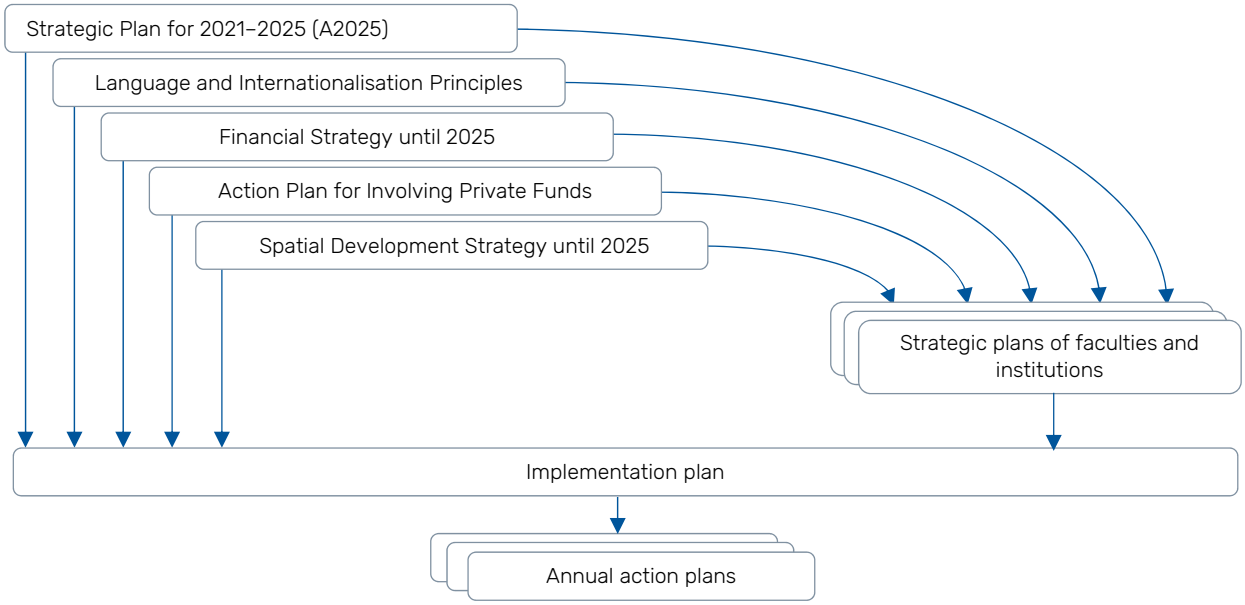

Figure 5. Relationships between UT's strategy documents

To implement A2025, the rector has approved the action plan for 2021. The planning process and its format have changed compared to A2020. The 2021 action plan links the performance agreements of the members of the Rector's Office directly to A2025 development tasks. Therefore, the target-setting and development-planning system also covers individual development and performance appraisals (see standard 6). As a new feature, the action plan includes central allocations to faculties to support the implementation of their development tasks. The faculties' strategic plans are worked out in line with the UT's strategic plan, reviewed by the Rector's Office and adopted by each faculty council.

1.2. Implementation of the university's structural and governance reform

During the analysis period, the UT's development was most of all influenced by the governance and structural reform which aimed to better align the decisions of different governance levels with the UT's general objectives, to create better conditions for applying academic excellence in teaching and research and ensuring the UT's balanced and sustainable development when implementing its mission.

The trend towards consolidation by areas of teaching and research was adopted already in the strategic plan A2008, which became effective in 2004. The university's renewed governing bodies – the council and the senate – started work in 2012 after amendments to the University of Tartu Act became effective. As a result of the reform, academic units of more or less equal weight were formed, and cooperation between the deans improved.

The development and implementation of the reform was coordinated by committees formed of the representatives of academic units. In the course of drafting the UT statutes, the statutes of all academic units were updated, the main tasks of each unit were specified, and the division of responsibility and tasks between the council governing the unit and the head of the unit was agreed.

Similarly to the principles of forming the UT's highest governing body – the council –, the university was recommended to limit the number of members in institutes' councils as well as to involve external members in the governing bodies, to more effectively manage the academic units and align them with the expectations of society. An analysis of the statutes shows that the recommendations have realised partially: on average, the number of members in institute councils is 18 (in the largest, 30), and nine institutes, or about a third, have appointed external members into their council according to the statutes.

A qualitative management survey conducted in 2020 revealed that the respondents were generally satisfied with the governance system introduced after the new statutes, whereas the deans as representatives of the higher governance level were more satisfied than heads of institutes. Assessing the organisation of UT's governance, the managers interviewed for the survey gave a positive rating to the right of the units to elect their own heads, the deans' position as members of the Rector's Office, the appropriate balance of autonomy and control, and the setting of objectives and expected results.

Considering that management is an additional task at the UT, academic units and faculties have created management-supporting positions (for example, vice heads for academic affairs in institutes and colleges, and vice deans for academic affairs and research and development in faculties) and cooperative bodies (for example, academic affairs committees in faculties) to ensure the quality of the UT's main activities and carry out development activities. Meetings of the Rector's Office take place regularly, and the vice rectors for academic affairs and research have regular meetings with vice deans responsible for academic affairs and research. These are also attended by student representatives. The representatives of faculties and students are thereby involved in preparing the activities, the drafting of bylaws and preparing the decisions, and they help explain the strategic objectives and initiated activities as well as organise cooperation in their area of responsibility. Since 2016, joint management seminars for members of the Rector's Office and heads of institutes have been organised. Since 2021, these seminars are regular, monthly discussions on topical issues. For the purpose of inclusion in the planning of changes, all the university's bylaws pass through an approval procedure in a special digital workflow.

1.3. Communication management

Marketing and communication activities support the UT's main activities, aiming to make the university open and prone to dialogue (A2025). An overview of the main communication channels is presented in annex 1. The general coordination of communication, incl. the development of channels and notification of high-impact changes, is in the competence of the Marketing and Communication Office (see figure 2) in the sphere of responsibility of the director of administration. In academic units, communication is organised by communication specialists of the units. In line with the general good practice, all staff members, but, first of all, managers of all levels are responsible for the communication of internal information.

The Marketing and Communication Office regularly monitors the use of the main internal communication channels and when reporting various issues, selects the channels that best consider the specifics and target group of each topic. Over the last five years, the use of central internal communication channels has become more active. For example, the internal newsletter is opened 1.5 times more often than five years ago.

To enhance the opportunities for inclusion of UT members, regular coffee morning meetings with the vice rector for academic affairs and idea meetings with the rector take place.

In 2019, a survey of students' information needs was organised, which showed that, as expected, students most of all need information about daily studies and organisation of studies, and they also need general information about the university. The students who participated in the survey pointed out the multitude of communication channels and the associated information noise. To alleviate the problem, preparations have started to develop the learner's dashboard that pools information for students from various information systems. This should be completed in springautumn 2022.

External communication involves public relations and the compiling of informational and marketing materials. To evaluate UT's reputation and visibility and compare it with other universities, the results of the annual reputation survey are monitored. The UT and its activities are highly visible in the Estonian media. Among the largest universities of Estonia, only the UT's media coverage increased in 2020. 40% of all the reportings of the UT were associated with coronavirus topics, which refers to the fact that in case of major problems in society, UT researchers are consulted for reliable information (see standard 11 and standard 12).

Media coverage of research topics has consistently increased in recent years. This is facilitated both by the increased interest of various audiences and by researchers' willingness to introduce their work. The UT offers central consultation and training to its staff for that. In 2021, to achieve wider international visibility, the university joined the Science Business network and forum which brings together entrepreneurs, universities and research policy-makers.

The number of the UT's communication channels and the number of employees whose duties include communication have increased in the recent years. This has brought about the need for closer networking and clarification of the division of duties and responsibilities. To this end, an analysis of the situation was started in 2019, followed by discussion seminars and workshops and the agreements on spheres of responsibility. At the beginning of 2022, the principles of UT's marketing and communication activities will be approved.

Strengths

- The units formed as a result of the successful structural and governance reform create better conditions for interdisciplinary collaboration, thus laying the foundation for the sustainable and balanced development of the UT.
- The UT's development is planned as an integrated process involving all levels of governance and considering the possibilities of the operating environment and the long-term strategic objectives.
- Well-planned communication activities have ensured the excellent visibility of the UT in the Estonian media.

Development activities

- By the end of 2022, to raise awareness of sustainable development goals among its members, the UT, supported by the ENLIGHT network, will prepare an action plan which, among other matters, will include changes in courses and curricula, the prioritisation of research topics supporting sustainable development, and the implementation of an environmental programme on the campus.
- For more effective marketing and communication, the division of work between different governance levels and units will be agreed and the university's marketing and communication principles will be updated in 2021–2022.

2. RESOURCES

Standard. The HEI develops its staff and manages its physical and financial resources in a purposeful, systematic and sustainable manner. Internal and external communications of the HEI (including marketing and PR) are targeted and managed.[2]

2.1. Recruitment and staff development

The UT is one of the largest and most diverse organisations in Estonia. The smooth functioning and fairness of the organisation are ensured by the centrally regulated human resources management (work rules, salary rules, leave rules). The most important bylaws related to the organisation of the work of academic staff (regulations for recruitment of academic staff, job descriptions of academic staff, regulations for evaluation of academic staff) are adopted by the senate. At the same time, to achieve the objectives of the UT's strategic plan, it is important that staff policy is sufficiently flexible and also takes individual needs into account in the organisation of work. The best arrangements concerning the organisation of work are made in the structural units, taking the university-wide regulations, the unit's opportunities as well as the employees' individual needs into account. The new career model introduced in 2021 and job descriptions for academic staff provide more flexible opportunities for that than in the past (on the career model, see standard 6). In the recruitment of academic staff, the UT follows the principles of the European Charter for Researchers and the Code of Conduct for the Recruitment of Researchers. Responsibility for organising the unit's work, including recruitment and staff development, lies with the head of the structural unit. The positions of academic staff are filled by a public recruitment procedure, and competitions for the positions of associate professors and professors are generally international; the election of academic staff takes place in collegial decision-making bodies (see also standard 6).

A2025 set out the objective of systematically supporting the self-development of employees, ensuring the next generation of executives and supporting their development into leaders who set an example for other university members. The head of unit is responsible for supporting the professional development of the employees of the unit: the duty to discuss development goals and opportunities with staff at least once a year and to evaluate the results proceeds from both the salary rules and the job descriptions of academic staff. A digital workflow is being developed to support this process and record agreements and feedback.

To better support staff development, the Centre for Professional Development has been operating at the Human Resources Office (HR Office) since 2016, which offers a wide range of self-development opportunities (on the self-development of teaching staff, see standard 6). Since 2020, employees can assess their training needs also in the annual job satisfaction survey. The results are used by the HR Office in planning training courses.

Table 6. Employees' participation in training courses organised by the Centre for Professional Development 2018–2020

Year	Number of courses	Participation times	% of academic staff participants	% of support staff participants
2018	207	2,827	49	51
2019	214	2,757	52	48
2020	226	3,941	53	47

The UT considers it very important to support the adaptation of its international staff members in Estonia: both international staff and their family members can attend the offered language courses and cultural seminars free of charge. Estonian language training of international staff is one of the key performance indicators of A2025: the target is that at least 45% of international employees will have participated in Estonian language courses (at the end of 2020, the figure was 33%).

To support the development of managers,

- the UT organises the manager's development programme based on the good practice of leadership for the third year already. The programme helps managers develop the skills and knowledge needed in their daily work, provides support to the starting manager and helps form the manager's network of relationships. By the end of 2020, 43 employees had completed the programme;
- managers can choose a development partner (mentor) from among their colleagues with whom to discuss difficult work tasks and situations. 44 employees have used this opportunity from 2015 to 2021;
- in 2021, the university organised a managers' 360° survey, helping managers assess their strengths and weaknesses and identify development areas within the organisation as a whole.

2.2. Principles of remuneration and motivating employees

The principles of remuneration and motivating employees are described in the Salary Rules. These lay down the types of positions, the corresponding salary grades, and the minimum rates for each grade.

[2] *On communication management, see standard 1.*

The salary scale was updated in 2020 to align it with the new career model; the distribution of support staff positions by salary grades also needed to be reviewed. The minimum rates of salary grades are reviewed at least once a year in the course of the budgeting process. The need for changing the minimum rates and the possibilities for that are assessed by the standing budget committee operating by the council. The changes are decided by the rector; the rector's decree and the explanatory memorandum are available to all employees on the intranet.

To implement a purposeful salary policy and make considered remuneration decisions, the HR Office regularly prepares comparative studies with the Estonian salary market and internal analyses of salary and work organisation. To ensure the fairness of remuneration, information about the average salary by position and faculty is publicly available on the statistics dashboard. One of the goals of the university's action plan for 2021 was to pay competitive salaries to retain and motivate high-level academic staff. The increase in the median salary of academic staff was part of the performance agreement concluded with the deans.

In some positions, there are gender differences in the average pay, but these are not uniquely in favour of men. The main reason for the gender pay gap lies in the structural difference: in Estonia, the proportion of women is higher in the lower-paid sectors (education, humanities and arts) and lower positions of the academic career (lecturer, teacher, assistant). According to Statistics Estonia, in education, women's average gross hourly wage in 2020 was 16.7% lower than that of men. Among UT positions, the largest gender pay gap in favour of men is in the teacher's position (the average salary of women is 9% lower than that of men). However, in the positions of professor, research professor, associate professor, and senior research fellow, women's average pay exceeds that of men (by 1.3–2.3%).

To raise awareness of equal treatment issues, the guidelines for equal treatment were updated in 2021 and a gender equality plan was drawn up, outlining more specific activities for 2022–2025. The university has set the reduction of both structural and unexplained pay gaps as one of its goals. From 2022 onwards, gender-disaggregated data on salaries, recruitment, etc. will be published in more detail on the statistics dashboard.

The new career model introduced at the beginning of 2021 created more flexible ways for agreeing on the tasks and workload of academic staff. The individual work plan allows for better implementation of employees' individual strengths. The career model created the opportunity to promote academic staff to a higher position based on an evaluation decision, ensuring greater job security and better career prospects for the best academic staff (see standard 6 for more details on the career model). It also created the opportunity for academic staff to apply their knowledge and gain new experience by temporarily working in the private or public sector (see the industry sabbatical guide).

The UT recognises its outstanding members on three levels: by central honorary decorations, annual awards and recognitions by structural units. At the end of 2019, the senate adopted the new Regulations for Giving Recognition, establishing a comprehensive recognition system.

The UT considers it important to have a good working environment and contributes to employees' health by compensating for the employees' costs of sports and health promotion. A comprehensive action plan for mental health and well-being was finalised in 2021.

2.3. Employee satisfaction with management, working conditions and information flow

Once a year, the UT invites all employees to openly assess the working environment, give feedback to their manager, highlight the positive and draw attention to what needs to be changed. The survey is conducted in an electronic environment, and its generalised results are accessible to all university staff. 1,511 employees (40% of staff) replied to the 2020 survey.

The results of the job satisfaction survey are used as input for managers' performance appraisals taking place once a year. The results are discussed at units' development seminars, where improvement opportunities are sought in cooperation between the manager and the staff.

Satisfaction surveys have shown that managers need to pay attention to the organisation of giving feedback to and recognition and remuneration of employees. Estimates of salary fairness have improved: in 2019, 63.7% of employees considered their salary fair, compared to 70.2% in 2020. One of the reasons for this change may be the recognition of the stability of the UT as an employer during a period of crisis that has shaken society financially.

2.4. Budgeting

As a legal person in public law, the UT must prepare consolidated annual reports in accordance with the Estonian financial reporting standard. The budget and annual report are adopted by the UT council, which decides on the taking of loans on behalf of the UT and establishes the principles of acquisition, burdening with limited real rights and transfer of immovable property, and of the establishment of and participation in legal entities.

The UT's financial activities, financial accounting, planning, analysis, preparation of the budget and draft annual report, and the organisation and development of procurement are the responsibility of the head of finance, who is in charge of the Finance Office and the Procurement Office. In 2020, to implement A2025, the council adopted a financial strategy

until 2025, which provided a financial framework for the strategic plan. The day-to-day management of the funds is carried out through the budget, the principles for the preparation, amendment and reporting of which are laid down in the budgeting rules. The accounting and financial reporting procedures are laid down in the internal accounting rules.

The financial strategy defines the objectives to guide the preparation of the budget:

- the UT's net assets form at least 75% of the balance;
- the loan burden does not exceed 25% of the annual revenue;
- the cost-to-income ratio is below 98%;
- the university's cash flows from economic activities are positive every year and the cumulative positive cash flows of 2016–2025 exceed the depreciation of fixed assets for the same period

Table 7. Indicators of the objectives of the financial strategy 2016–2020

	2016	2017	2018	2019	2020
Net assets / balance sheet total	87%	88%	80%	79%	77%
Loans / operating income	10%	7%	17%	14%	12%
Operating expenses / operating income	107%	106%	96%	94%	98%
Cash flows from economic activities (mEUR)	8.1	3.6	7.9	16.7	22.4
Depreciation of fixed assets (mEUR)	15.9	16.7	16.5	15.2	17.4
Cumulative cash flow – depreciation (mEUR)	–7.8	–20.9	–29.5	–28.0	–22.9

Each year, the council approves the principles for preparing the budget for the following year, based on the UT's strategic plan, financial strategy, changes deemed necessary by the council, the senate and the Rector's Office, and the changing external environment. In 2020, the council approved the budgeting principles for 2021–2023 to provide faculties with stable longer-term financing for making strategic decisions.

The expenses of the museums, botanical garden and sports and cultural activities are covered from the UT's budget. The principles of their financing are reviewed annually and adjusted if necessary.

The delayed start of the EU structural funds led to a sharp decrease in the volume of the structural funds, resulting in the expenditure exceeding revenues in 2016 and 2017. Between 2014 and 2017, the number of staff decreased by 7.4%, as a result of which the UT achieved the desired cost-to-income ratio by 2018. In 2018, the volume of structural fund support recovered in the budget, but its share of the UT's budget has decreased.

The UT's revenue has increased year after year: the revenue in 2020 was the highest in the university's history (€205.5m). In addition, in 2020, research revenue exceeded that of teaching. The main sources of revenue growth in 2016–2020 were the baseline funding of research institutions, domestic funding, EU structural funds and service agreements.

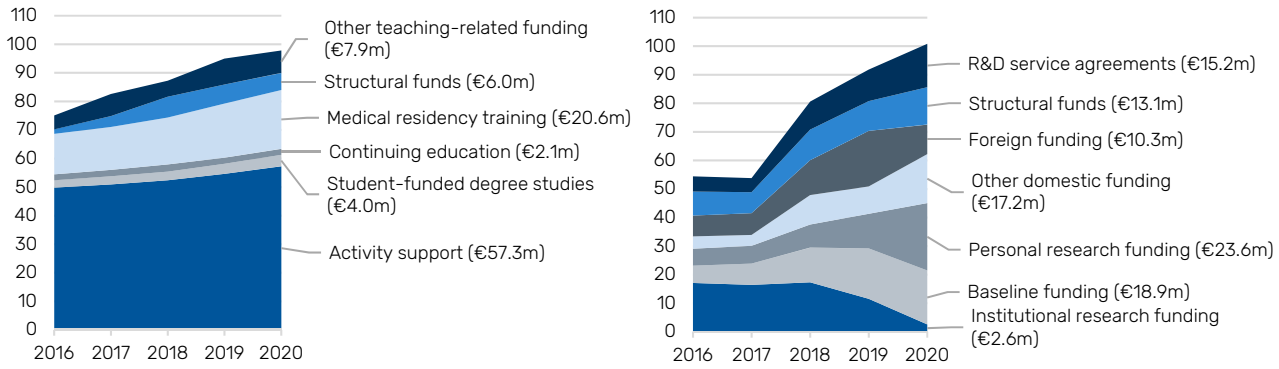

Figure 6. Teaching and research revenue (mEUR) 2016–2020

The UT's largest contractual partner is the state of Estonia. To increase and diversify the revenue base, a strategy for the involvement of private funds has been drawn up, opportunities for joining new partnership networks are analysed, and a project writing unit has been formed (see standard 11).

To provide additional funding for the achievement of the university's strategic objectives, the council has placed the development fund (see standard 1) and the funds for faculties' performance funding at the rector's disposal. In the 2021 budget, strategic development support for degree studies was added as an additional management instrument for deans to guide the institutes towards achieving specific objectives. Almost a third of this support is related to the development of e-learning.

Table 8. Strategic development support 2016–2021

(in thousand euros)	2016	2017	2018	2019	2020	2021
Development fund	2,238.1	1,767.2	2,222.8	3,113.7	3,023.6	3,396.6
Performance support	2,760.0	1,941.0	1,608.6	1,804.3	1,572.2	1,481.1
Development support for teaching and studies						1,025.8
Total	4,998.1	3,708.1	3,831.4	4,918.0	4,595.8	5,903.4

Inefficiently operating structural units are reorganised. Active measures are in place to reduce and avoid fragmentation of activities and resources. As a result of the largest structural reform (the formation of four faculties), the number of structural units facing difficulties with financial discipline decreased significantly. Today, the financial standing of all units is positive.

The Finance Office monitors the financial balances and financial discipline on an ongoing basis. For this, a finance web has been created, which can be used by all financial account holders. In addition, the Finance Office assesses the financial behaviour of all structural units every month (on a scale from A to F) and publishes the results on the intranet. A financial manager can be involved in units that have difficulties with financial discipline, combined with a strict ban on increasing salaries, paying additional remuneration and hiring new employees. In such a situation, any payments can also be made only with the approval of the financial manager. Based on the assessments of the financial situation, the rector last appointed a financial manager in 2017 to the Institute of Mathematics and Statistics.

To ensure an increase in financial management competence at all levels of governance and in all structural units, and to make even more informed management decisions, the Finance Office systematically organises internal training courses on accounting and budgeting. All accounting documents have been digitised and their coordination and approval take place quickly as digital workflows.

2.5. Infrastructure

The planning, acquisition and transfer of the UT's buildings are based on the Spatial Development Strategy until 2025, the goal of which is to ensure the modernisation, sustainability, environmental and energy efficiency of the academic and research environment and working conditions, as well as the optimisation of real estate costs. Among other principles, the strategy states that the university guarantees the preservation and increase in the value of its historical buildings in central Tartu.

In addition, the rules on the use and disposal of immovable property and a list of immovable property that is not needed for UT's main activities have been established. The planning and execution of all construction work are based on the rules of construction work and investment in immovable property. Questions related to the use of rooms (incl. the preparation of spatial programmes) are solved based on the rules of using buildings and rooms, which also establish the activities and procedures of the rooms committee. The prioritisation, budgetary planning and realisation of construction works are carried out on the proposal of the Rector's Office through the capital budget approved by the council. The capital budget is drawn up with at least a three-year forecast.

In 2015–2020, four new buildings were built: Delta academic and research building, Delta business building and Ujula 4 extension in Tartu and student hostel in Narva, with a total area of ca 33,600 m^2. Major renovations were carried out to modernise the library (with a total area of ca 27,600 m^2). In 2021, the reconstruction of the academic building for the Institute of Ecology and Earth Sciences was completed. The reconstruction of the academic building for the Institute of Education and the construction of the new part of the building are nearing completion (total area of ca 9,800 m^2).

Table 9. Investment in buildings and repair costs 2016–2020

(in thousand euros)	2016	2017	2018	2019	2020
investment in buildings	3,759.8	8,274.2	26,491.7	27,929.6	15,704.9
current repair costs	1,382.2	896.9	1,185.3	1,397.5	1,328.6

At the end of 2020, the UT owned 131 immovable properties with a total area of about 312,700 m^2. The historical buildings include 10 properties with a total of 20 buildings, approximately 44,000 m^2 of which (82%) have been renovated.

The spatial development strategy until 2025 continues with the principle that the UT prefers to manage buildings itself to ensure a uniform standard of technology, a uniform standard of administration, cost-efficiency, and the transparency and comparability of cost accounting. Spatial development is intended to be increasingly linked to the UT's digital development: digital solutions are introduced for the booking of premises for cross- and shared usage, for the central management of the technical, access and other systems of buildings, and for linking cost management to the UT's information systems. As much as possible, environmentally sustainable solutions (remote cooling, solar energy, etc.)

are preferred when buildings are reconstructed; technical systems, in particular ventilation systems, are renewed. The changes in the learning and working environment (e.g. a more active use of digital solutions in teaching and support activities) are taken into account.

In terms of information technology (IT), the UT is a very large organisation in Estonia – students and employees together account to about 17,000 users, to whom about 35,000 continuing education learners and thousands of external partners are added each year. A peculiarity of the UT is that the focus of its IT services is not a self-service system with a limited number of services (as in most large service organisations such as banks and public authorities), but all users need a broad spectrum of IT services – a Wi-Fi network, email, study and meeting rooms, information systems for different content and purposes, teaching technology, storage capacities, etc. The main purpose of developing information systems is their functionality and user-friendliness, which helps reduce paper consumption and ensures a fast, convenient and transparent data management and work processes for both UT members and partners. In the past three years, there has been a major qualitative digital leap in documentary procedures: the processing of directives (in 2017, 78% were on paper), correspondence (in 2017, 58% on paper), minutes (in 2017, 50% on paper), internal documents (in 2017, 39% on paper), contracts (in 2017, 34% on paper) and several other processes have been taken to a fully digital form. In total, nearly 97% of all official documents were processed electronically in 2020, compared to 75% in 2017.

The IT Office is responsible for developing and maintaining ICT equipment and management and support information systems. The IT helpdesk receives more than 13,000 requests each year. In 2017, the UT started to use the digital issue tracking system Jira, which brings together all helpdesk requests, suggestions for purchasing hardware and software, as well as information systems development and monitoring of their progress. Since 2017, users' satisfaction with the helpdesk service is measured.

The activities related to IT are based on the procedure for provision of information technology services. In 2020, an information security audit was carried out at the UT and the updating of the information systems development vision compiled in 2015 started. In 2021, meetings with 52 structural units took place to identify the needs for IT services. These steps serve as a basis for planning improvement activities.

The UT's major central information systems are

- the study information system (SIS). From 2019, a gradual transition to the new SIS takes place (see standard 10). In addition, teaching activities are supported by various digital environments (the largest of them is the learning management system Moodle), the use and integration of which have been developed for years (see standard 8);
- the document management information system (DHIS), based on which a number of workflows have been built over the years, e.g. for authorisation agreements and contracts for services, additional remuneration, cost reports, purchase invoices, sales invoices and communications service approvals. In addition, the DHIS has been integrated with several other UT information systems, allowing to receive and store documents and data related to the university's activities;
- the financial and human resources software, the new version of which was introduced in 2021 (MS F0365).

In addition, to organise the UT's financial and human resources management, more than 20 workflows and digital environments on the intranet desktop are used to support better planning and organisation of daily work. These include

- the finance web for managers and financial account holders to monitor funds, make and analyse financial decisions and plan the budget;
- the salary web for managers to make salary decisions. It also includes data on employees' salaries and analyses to help make salary decisions;
- the grant web for initiating projects, coordinating documents and getting an overview of ongoing projects;
- the university's bylaw processes workflow;
- the assets web for persons responsible for accounting assets to monitor staff-related assets and carry out operations related to their management;
- the leave schedule for planning the leave schedules for the university, the appointment of substitutes and the approval, modification and cancellation of leave periods;
- the asset management information system for keeping a digital record of the usage costs of all the UT's buildings and rooms, as well as all information about the premises (incl. rental premises) and their in-house users;
- the training calendar for searching, booking and managing internal training courses;
- the feedback web with job satisfaction surveys since 2016;
- the UT wiki, which includes the user manuals and usage principles for various activities, processes and information systems, as well as the principles for creating, publishing and managing the digital repository.

In addition to the workflows and environments on the intranet dashboard, the publicly accessible statistics dashboard also supports the planning of daily work.

To review the IT services offered at the UT and the principles of their financing and division of the related responsibilities, the UT has set a goal to organise the central IT services and their management and development processes by the end

of 2022, as well as to draw up an action plan for the next five years, taking into account the needs of structural units. The action plan also includes the review and renewal of all UT's IT-related bylaws and other agreements, including the principles of planning, prioritising and investing in IT development projects, information security principles, the principles of the provision of IT services, etc.

Strengths

- The internal training system functions well and considers the needs of different target groups (teaching, general skills, management competencies, etc.).
- The data of the annual job satisfaction survey is used in units' development activities and the assessment of managers' performance.
- Even though 55% of the budgetary revenue (75% of research revenue) is project-based, which represents a risk for the continuity of the UT, the large number of projects have been managed exemplarily and the university's continuous development has been ensured.

Development activities

- Based on the 360° feedback, follow-up activities are planned to develop managerial competencies and ensure the new generation of managers.
- To streamline the performance appraisal process, a digital solution will be created in 2022 to support the conducting of performance appraisals.
- Information systems and risk management need to be continuously updated in line with the architectural vision, the principles for developing information systems and the information security strategy and audit.

3. QUALITY CULTURE

Standard. The HEI has defined the quality of its core and support processes, and the principles of quality assurance. A regular internal evaluation of various levels is used at the HEI that supports strategic management (HEI, units, study programmes). Results of the internal and external evaluation are analysed, and improvement activities are implemented.

3.1. Quality management

Quality management is based on A2025, which has formulated the UT's mission, core values and vision, as well as the functions that define quality upon the implementation of the strategic plan. Sections 12, 22 and 24 of the UT Statutes stipulate the responsibility of the senate, the faculty council and the institute in quality assurance. Quality assurance at curriculum level is described in chapter III.2 of the Statutes of Curriculum.

Quality management is a natural part of strategic management, which is the responsibility of the rector. Principles of quality management have been established by a senate resolution. UT quality management is based on the Deming cycle of continuous improvement, which includes planning, doing, (interim) checking and acting, i.e. improvement based on assessment results. An overview of all core processes has been prepared, with persons in charge and the relevant bylaws, strategic documents and instructions. The overview reveals that the UT's activities are generally consistent with the bases and good practices of quality management.

Regular internal and external evaluations give information about the quality of core and support activities. Internal evaluation includes[3]

- internal evaluation of teaching and learning and the monitoring of performance indicators of curricula;
- evaluation of employee satisfaction;
- course feedback in every semester and feedback to the functioning of curriculum as a whole twice during bachelor's studies and once during master's studies;
- evaluation of academic staff and progress review of doctoral students;
- performance appraisals of employees;
- internal auditing.

The results of internal auditing are introduced to the UT members in the course of management communication, via intranet and the internal newsletter; the results serve as a basis for planning internal training and seminars for employees, and improving the work environment (see standard 6). The monitoring of UT's activity and performance indicators are supported by digital dashboards. As a drawback, it should be pointed out that not all activities have been similarly applied across the entire UT and the created services are not always used to the full extent or by all target groups. For instance, there are units where performance appraisals are not conducted. Similarly, not all teaching staff members who have been recommended, based on course feedback, to undergo teaching methodology training are interested in it.

In addition to regular external evaluations by EKKA, in 2019, the UT participated in the accreditation of entrepreneurial universities and received the international entrepreneurial university accreditation from the Accreditation Council for Entrepreneurial and Engaged Universities (ACEEU).

3.2. Internal evaluation of teaching quality

From 2014 to 2017, the UT reformed the curricula of the first and second level of higher education. After that, in 2018, the procedure of internal evaluation of teaching quality (curricula), which had been in force since 2009, was reviewed, incl. the use of student feedback and the role and responsibility of programme directors.

Development work was initiated aiming to

- empower programme directors, specifying their role and responsibility;
- link the results of student feedback surveys to other indicators about the curriculum and teaching;
- make the evaluation more evidence-based;
- make the internal evaluation easier and its results more impactful.

Since spring 2019, a course feedback questionnaire developed based on new methodology has been in use. The course feedback dashboard in the SIS helps programme directors analyse its results. In spring 2020, also a new curriculum questionnaire was introduced, designed to gather feedback from students on their learning experience during the academic year, enable students to analyse their own progress and provide information for quality assessment and making management decisions. The questionnaire results are displayed in the SIS on the curriculum statistics dashboard, which pools also all other available data, incl. graduates' employability and salary data, and outcomes of the national alumni survey, for the programme director for curriculum analysis and comparison of results.

[3] *See also* standard 2 *and* standard 6.

In 2020, a draft internal evaluation report was completed based on data from the curriculum statistics dashboard; it was tested and improved by 17 programme directors. Then a new procedure of internal evaluation was established with an amendment to the Statutes of Curriculum.

Earlier, the internal evaluation took place once in three years, at the same time for all curricula of the first and second level of higher education. According to the new procedure, teaching quality is assessed every year: on two years, the programme director makes an interim report, and on the third year, a more detailed report. Every year approximately one third of the curricula undergo the detailed evaluation. This arrangement of evaluation enables the councils of academic units and faculties to better review the curricula's strengths and proposals for development as they can focus on fewer curricula at a time.

Strengths

- The planning of the UT's development is inclusive and purposeful. The strategic plan and its supporting strategy documents have defined the quality criteria of the UT as an organisation and its core activities.
- The UT conducts regular internal evaluation by various activities and levels of governance. The results of internal evaluation are used for the planning of developments.
- The UT's activity and performance indicators are monitored by means of digital dashboards.

Development activities

- In the ENLIGHT network, the UT with eight other European universities will work out the common principles of quality management by 2023.

4. ACADEMIC ETHICS

Standard. The HEI has defined its principles of academic ethics, there is a system for disseminating them among its members, and has guidelines for handling any cases of misconduct. The HEI has a functioning complaint handling system in place.

The UT has compiled the following good practices and guidelines for ethical conduct, describing the values voiced in the strategic plan and the regulations provided in the bylaws and giving guidance for behaving in various situations:

- the guidelines for equal treatment along with schemes for resolving both students' and employees' complaints (2016);
- the code of conduct for research integrity (2017), which was the basis for the Estonian Code of Conduct for Research Integrity Agreement (see also the instructions for applying the Code of Conduct for Research Integrity);
- the good practice of leadership (2017);
- the guidelines on preventing, identifying and solving conflicts of interest and corruption-prone situations (2018);
- the good practice of teaching (2016) – an agreement that began as discussions in the teaching communities of practice and includes the principles and values based on which the UT members can evaluate and develop excellent teaching. The good practice of teaching is the basis for the training and counselling of teaching staff, applying for the scholarship of teaching and learning, giving the annual best teaching staff awards and compiling the analysis of the development of teaching for evaluation;
- the good practice of learning (2016) – the agreement of the UT student body on what good learning is and how it should be done. The good practice of learning has been referred to, for instance, when having to reprimand students;
- the good practices of giving feedback (2012), guiding students to be constructive and polite when responding to the feedback questionnaires on courses and curricula. The good practices of giving feedback support the following of the good practices of teaching and learning;
- the good practice of doctoral studies (2014) aims to provide an advisory code of conduct for all parties of doctoral studies;
- the good practice of Olympiads and competitions.

4.1. Equal treatment

In 2016, the UT was the first public university in Estonia to prepare the guidelines for equal treatment including the principles of processing complaints, resolution schemes and the complaint form.

At the beginning of 2020, the updating of the guidelines for equal treatment was initiated, and feedback and opinions were collected from UT members. Although the guidelines compiled in 2016 included the description of procedure rules, how to file a complaint and resolve problem situations, most UT members had not heard of the guidelines and did not know who to turn to for help if problems occur. As major bottlenecks, it was highlighted that:

- the general awareness of students and staff about the principles of equal treatment and gender-based and sexual harassment is low;
- information related to equal treatment and other good practices on the UT website is difficult to find;
- there is no university-wide support network the employee or student could turn to for initial advice in case of a problem, for instance, if the person does not wish to file a formal complaint immediately;
- people do not know how to resolve the problem situations by filing a complaint (where, to whom and within what time frame);
- a clearer division of roles is needed in the complaint-handling process, and the deadlines for dealing with complaints are missing.

The updated guidelines were completed by the end of 2021. A mental health conference is scheduled to take place in early 2022, focusing on equal treatment issues.

4.2. Handling employees' complaints and counselling

Employees' complaints are generally handled at the academic unit. If the head of unit is involved in the violation or the person does not wish to contact the head of unit for any other reason, the complaint can be submitted to the academic secretary. The academic secretary is a member of the UT management whose task is to resolve matters relating to academic employment relations and the principles of equal treatment within his or her sphere of responsibility.

From 2016 to 2020, 21 complaints or appeals were submitted to the academic secretary, half of them (11) in 2020. The larger number of complaints over the last year shows that people's awareness of the possibility has increased.

Complaints have been related to, for instance, sexual harassment, workplace conflicts or bullying, and equal treatment issues. In addition, appeals related to the results of competitions for academic positions or employees' evaluation have been submitted.

Since 2017, a counsellor-chaplain works at the UT who provides support to employees if they have problems in their working life, helps to improve the relationship climate of units or teams through group counselling and cooperation seminars, and, with the consent of the parties, contributes to the reconciliation of conflicting parties. The counsellor-chaplain offers staff psychological support and mediation. 433 talks took place from 2017 to 2020. The main topics have been interpersonal conflicts and personal problems (e.g. difficulties in close relationships and grief), which hinder focusing on work. From November 2019, monthly meetings with the chaplain take place online, where a wide range of topics related to psychology and interpersonal relations are discussed.

An anonymous whistleblowing platform is being developed in line with the EU directive on whistleblower protection.

4.3. Research integrity

In 2017, the UT compiled its code of conduct for research integrity which became the basis for the Estonian Code of Conduct for Research Integrity Agreement between universities and research institutions. The senate approved the document in March 2017. In January 2020, the senate approved the instructions for applying the code of conduct for research integrity which describe the procedure of resolving cases related to the breaches of research integrity.

To apply the code of conduct for research integrity, the UT has created a faculty-based counselling system. From 2020, each faculty has a research integrity counsellor who supports the faculty's researchers if they have questions and concerns and gives advice on issues related to research integrity. The counsellors are not involved in the handling of complaints and suspicions. As at 31 October 2021, the counsellors have received 34 requests, with the most frequent issue being the need for approval from the ethics committee. Most requests were related to asking for advice, and only two were forwarded to the academic secretary. According to the counsellors, there are also gaps in the teaching staff's awareness of intellectual property issues: for instance, how to establish co-authorship for supervised articles.

An increasing number of studies are subject to approval by the ethics committees. For example, at the UT human research ethics committee, 146 applications by UT researchers were approved in 2020 (86 in 2016). Researchers may also apply with ethics committees of other research institutions.

4.4. Study integrity

When starting studies, students confirm that they have read the documents related to the organisation of studies, the use of the study information system, data protection and good practices. The teaching staff is guided by the best practice of teaching in their work.

Although information related to copyright and creative theft is available to raise awareness among teaching staff, the response to academic fraud (cheating, plagiarism) requires further organisation and harmonisation in the UT. In the new Study Regulations in force from the 2021/2022 academic year, the procedure of processing cases of improper behaviour was harmonised across faculties, based on the practice used at the Faculty of Social Sciences. Improper behaviour includes academic fraud, a serious violation of generally accepted rules of behaviour or academic code of conduct, forgery of documents and an intentionally committed criminal offence while a student.

The Study Regulations spelt out more clearly the good academic practice that participants in teaching and studies serve as a model to each other by their honest and fair behaviour and the good practice to inform the university if the student notices an incident of academic fraud. The previous regulations stipulated that if the student has committed academic fraud or otherwise behaved in an improper manner, the vice dean for academic affairs must reprimand the student or make a proposal to the vice rector for academic affairs for the student to be exmatriculated. However, it turned out that the teaching staff do not wish to start a formal reprimand procedure in case of suspicion of academic fraud if they understand that the student made a mistake in referencing due to lack of skill or knowledge, or if they consider it too difficult to prove the fraud. Therefore, in addition to reprimanding and exmatriculating the student, there is now the option to issue a warning to the student, aiming to help the student understand the mistake and learn from it. In 2016–2021, 12 students were exmatriculated due to improper behaviour.

Both the introductory courses included in the curricula and the courses supporting the writing of the graduation thesis deal with the issues of academic ethics, including correct referencing. Since the 2018/2019 academic year, all bachelor's curricula include a compulsory academic Estonian language course of at least 3 ECTS and courses on the basics of research. Estonian language courses take place mainly in the first study year and also include the topics of quoting, paraphrasing and referencing.

The Study Regulations stipulate that the UT is entitled to check students' written papers with a plagiarism detection system. Checking graduation theses with the plagiarism detection system is not obligatory at the UT, but a common

practice. The plagiarism detection software Ouriginal used at the UT is integrated with the Moodle environment (on Moodle, see standard 8). In cooperation with the teaching staff, students can use the Ouriginal software for self-assessment.

4.5. Data protection

Data protection has been discussed in various UT documents and guidelines:

- the Data Protection Policy explains how the UT processes personal data of data subjects;
- the general responsibility for processing personal data has been regulated in the Documentary Procedure Rules (clauses 47–57);
- guidelines have been compiled on processing the data of job applicants;
- there are brief guidelines on the intranet, i.e. answers to frequently asked questions, which are updated as necessary;
- the UT wiki includes several topics related to personal data;
- a data protection policy has been compiled for processing the data of pupils involved in the activities of the Youth Academy;
- guidelines on protecting students' personal data in e-learning.

Although personal data protection has been exhaustively regulated in the UT, raising awareness on this topic needs to be stepped up. In the first half of 2022, a guide "Personal data in the graduation thesis" for students is planned to be completed and a guide "Personal data in research" is compiled in cooperation with the Centre for Ethics.

4.6. Centre for Ethics

The UT has served as an example and centre of competence on ethics and values for other Estonian universities. Since 2001, the UT has the Centre for Ethics, the task of which is to

- organise and conduct interdisciplinary research in the field of ethics;
- foster reflections on norms, values and questions of justice in Estonian society through organising public lectures, meetings, seminars and discussions;
- coordinate and improve the teaching of ethics at the UT, and prepare anthologies and textbooks on ethics for publishing;
- develop contacts with other ethics centres and organise inviting guest lecturers from universities in Estonia and abroad.

The Centre for Ethics also manages the Ethics in Estonia website, which includes a more detailed overview of the various fields of ethics.

Strengths

- As a result of wide-ranging discussions and agreements, the UT has developed good practices, or codes of ethical conduct, which support the values set out in the UT strategic plan and clarify the norms laid down in the bylaws.
- An efficient counselling system is in place: research integrity counsellors work in all faculties. In addition to the system of filing complaints regarding equal treatment issues and other complaints, there is a chaplain-counsellor to whom employees can turn if they have interpersonal or other problems at work.
- The research carried out by the UT Centre for Ethics provides a solid basis for making ethics-related decisions at the UT.

Development activities

- To raise awareness of equal treatment issues, the respective training courses for staff and a conference will be organised in 2022.

5. INTERNATIONALISATION

Standard. The HEI has set objectives for internationalisation and regularly assesses the progress of achieving them. The HEI has created preconditions to encourage international mobility of students and teaching staff, supporting the development of learning, teaching and RDC activities, as well as the cultural openness of its members and Estonian society in general.

In internationalisation, the UT follows the objectives of its strategic plan (A2020 and A2025) and is guided by general objectives set at both Estonian and European level, with a focus on improving the quality of higher education.

In A2020, the UT set the goal to actively engage in international cooperation, develop existing and create new international curricula, and provide students with a motivating international learning environment of excellent quality.

5.1. International cooperation

To emphasise the importance of internationalisation, the senate approved in 2020 the language and internationalisation principles. UT members follow them in the development of the university and in the organisation of its everyday work to maintain the balance between the two contradictory tasks of Estonia's national university: ensuring the sustainability of the Estonian language and culture, and internationally high-level research and teaching.

The UT has joined several European networks of renowned research universities, The Guild, LERU-CE7, CELSA, Coimbra, Utrecht, Europaeum and ENLIGHT, to have a say in EU research policy-making, facilitate partnerships, encourage the mobility of students and teaching staff, and strengthen the academic and cultural contacts between universities.

In The Guild and LERU-CE7, the focus is primarily on increasing funding for research policy, strengthening the role of humanities and social sciences, and developing business relations and innovation. CELSA aims to enhance academic cooperation. Membership in the Coimbra group gives an opportunity to have a say in shaping the European higher education scene. Europaeum lays great emphasis on facilitating student exchange in doctoral studies, and the Utrecht network at all levels of study. ENLIGHT has obtained funding from the Erasmus+ European University initiative and its mission is to fundamentally transform European higher education, to empower learners to become globally engaged citizens with state-of-the-art knowledge, skills, and innovation potential to tackle major societal challenges and promote equitable quality of life and sustainability. To this end, ENLIGHT establishes the foundations of an integrated European University System with free movement of students and staff, and sharing of resources. Gradually, the participating universities' quality assurance structures, international outreach and global engagement, talent recruitment and investment in large research infrastructure will be harmonised.

5.2. Student mobility

To ensure successful mobility, the UT has made numerous international cooperation agreements. Most of the students participate in mobility through the Erasmus+ programme (on average, 60% in 2016–2020). Also, more than 60% of international visiting students studying at the UT are Erasmus students. The Erasmus+ European mobility agreements are made by academic units, and the signing of agreements is organised by the units' Erasmus mobility coordinators, according to the UT guidelines. In 2020/2021, the UT units had 960 Erasmus+ cooperation agreements with European partners.

To promote student mobility outside Europe, the UT has successfully used the possibilities of the Erasmus+ Global Mobility programme (53 agreements in 2020/2021) and inter-institutional cooperation programmes, incl. 29 agreements for student mobility. An important programme for student mobility outside Europe is ISEP. Half of the 320 ISEP members are located in the United States. Also, the Utrecht network offers the possibility for cooperation with 13 US universities and a consortium of seven Australian universities.

The Study Abroad Centre informs students of international mobility opportunities via various channels, incl. social media and sharing experiences in blogs, which has been well received by students.

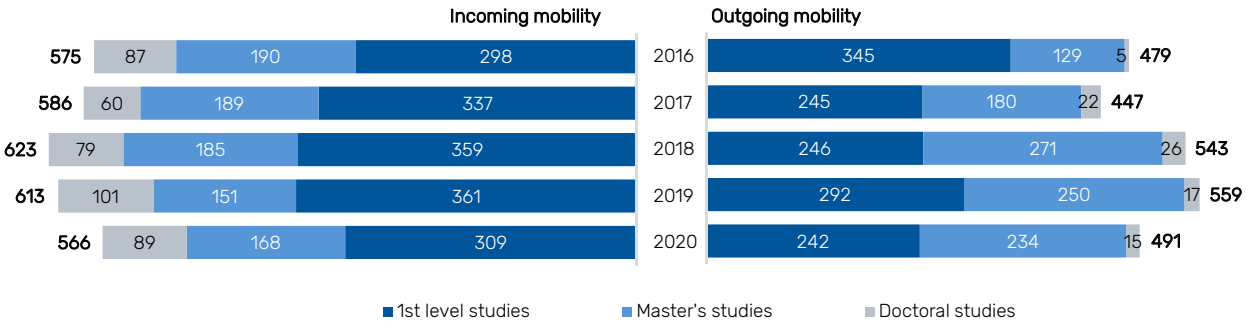

Figure 7. Number of students who studied abroad and international visiting students by study levels 2016–2020

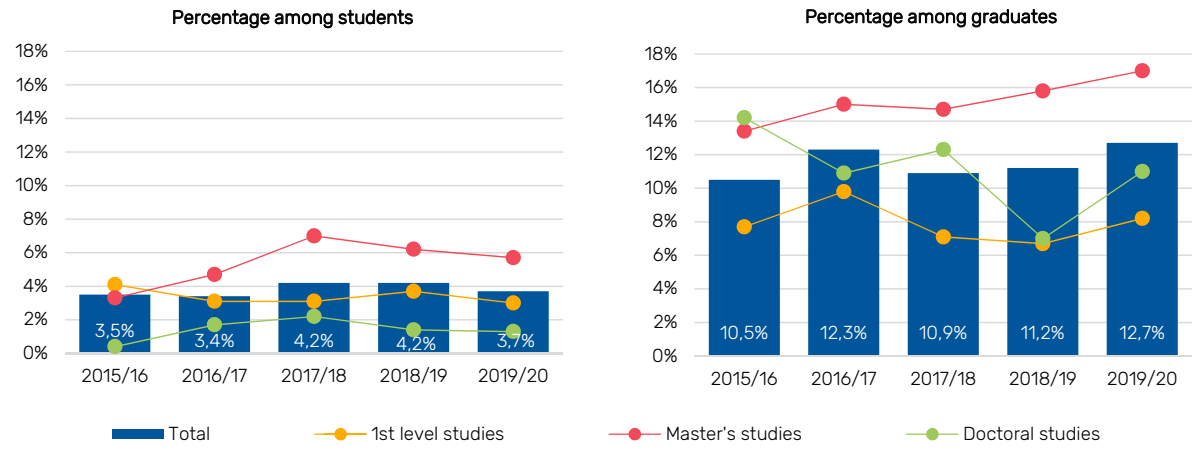

Figure 8. Percentage of students who studied abroad among students and graduates in the academic years 2015/2016–2019/2020

In 2015–2020, the number of students who studied abroad increased by 3%. For the 2019/2020 academic year, a significant rise was expected: all units created and actively introduced opportunities for student mobility, including mobility windows. Due to the coronavirus pandemic, the number of students participating in student mobility remained smaller than planned, both at the UT and in Estonia as a whole.

In A2025, the UT has set the goal to support students to gain experience in an international learning environment, including through distance learning online. Erasmus+ Policy Statement for 2021–2027 is based on the objectives of the UT strategic plan. The goal is to have at least 18% of the graduates with an experience of studying abroad. Enhanced mobility opportunities are also provided to students by the ENLIGHT network through flexible, i.e. short-term learning opportunities and those combined with e-learning.

To allow for study mobility, as of the 2020/2021 academic year, the curricula of the first and second level of higher education, excl. the curricula of Medicine, Dentistry and Pharmacy, and the curricula with the obligation to study abroad, include a mobility window of 15 ECTS as one of the elective modules. A mobility window is a module or set of courses in the curriculum, incl. practical training, which the students can complete abroad. This requires agreements with partner HEIs to support the mutual recognition of studies. The mobility window helps to plan studies abroad better to avoid the extension of the standard period of study, and supports the achievement of learning outcomes during the studies abroad. The programme director is responsible for the functioning of the mobility window, and the system has been explained to students on the faculties' websites.

The arrangement of learning mobility is governed by the university's Study Regulations. For the recognition of studies abroad, the student prepares a study plan before the start of the study or practical training period and draws up a learning or practical training agreement based on the study plan approved by the RPL committee. In the 2019/2020 academic year, 90% of the students who studied abroad completed courses to the extent of at least 15 ECTS. 58% of students who completed practical training abroad earned fewer than 15 ECTS (the average total volume of the practical training course in the 2019/2020 academic year was 9.5 ECTS). As of 2021/2022, students participating in Erasmus+ mobility in Europe can use the Online Learning Agreement. To facilitate the process, an academic affairs specialist of the relevant unit approves the agreement on behalf of the UT.

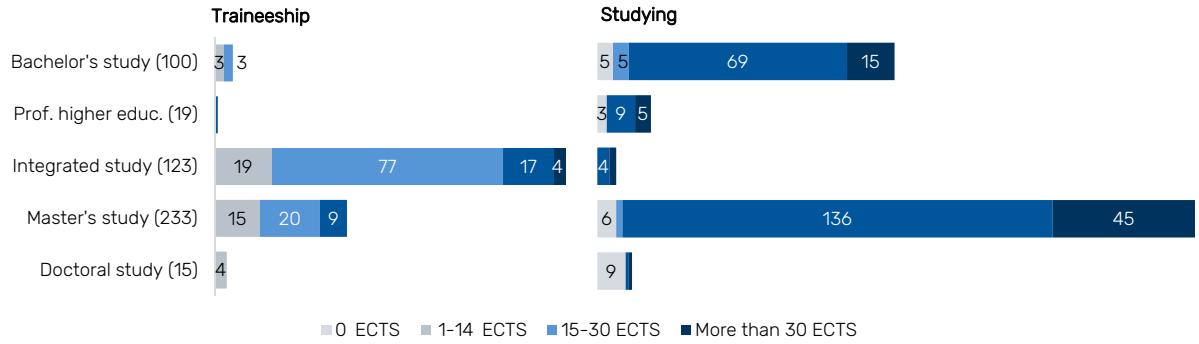

Figure 9. Breakdown of students who studied abroad based on credits transferred in the 2019/2020 academic year

To international visiting students, the UT offers English-taught courses and modules that are generally part of the UT curricula. In some disciplines, it is difficult for international visiting students to find suitable courses, so the UT plans to create, in cooperation with partner universities, intensive courses integrated in the Erasmus+ programme, to increase the volume of English-taught courses in these disciplines.

5.3. Studies in foreign languages and international students

The UT has actively developed non-Estonian-taught curricula at the first and second level of study. A diverse international learning environment enables students to get an international experience in their home country. This is important for students unable to go abroad during their university studies, and gives a good preparation to those planning to study abroad. In the 2020/2021 academic year, non-Estonian-taught curricula accounted for 23% of all curricula of the first and second level of study. In 2016–2020, the percentage of such curricula increased the most at the master's level (35%). Together with the rise in the number of non-Estonian-taught curricula, also the percentage of international students increased to 12% of the total number of students. International students' studies have been significantly supported by the national scholarship programme for master's and doctoral students Dora Plus (2015–2023) and the Development Cooperation Programme of the Ministry of Foreign Affairs.

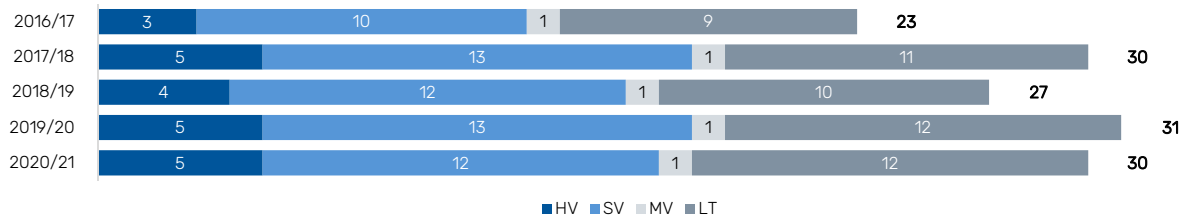

Figure 10. Number of non-Estonian-taught curricula by faculties 2016/2017–2020/2021

The UT has been successful in applying for funding from the Erasmus Mundus Joint Masters programme. In 2020, five UT master's curricula won the Erasmus Mundus grant: Excellence in Analytical Chemistry, which received it for the third time, and four curricula, in which the UT participates as a consortium partner.

Doctoral studies are international by nature. According to the UT's good practice of doctoral studies, the supervisor creates opportunities for the doctoral student to communicate with the international research community of the specialisation based on the research needs of the doctoral student. The doctoral students' international studies and research is organised by 11 ASTRA doctoral schools that focus on advancing doctoral students' research and building up their cooperation network and, to a lesser extent, also supporting the supervisors' professional development. Doctoral schools support the mobility of doctoral students and organise more than 20 international specialisation-specific or interdisciplinary events a year. There are lectures, workshops and intensive courses by international academic staff, and individual consultations provided in the course of the events. Some doctoral schools offer the possibility of involving an external consultant for the doctoral thesis. Cooperation with international supervisors is supported at the UT by joint supervision agreements of doctoral students. In 2012–2020, a total of 27 such agreements were made with 24 partner universities and under these agreements, 16 people defended their doctoral thesis.

5.4. International academic staff

According to A2025, the UT aims to increase the percentage of international academic staff to 15–20%. In 2016–2020, the percentage of international academic staff grew from 8% to 15%. The percentage of international teaching staff in 2020 was the biggest among professors and lecturers (13–15%), and the smallest among assistants and teachers (3–5%). Of the supervisors of doctoral theses defended in 2017–2019, 11% worked for an institution abroad.

The involvement of international academic staff in the UT's daily activities and governance is organised based on the language and internationalisation principles. The UT follows the principle of parallel language use in organising the work of decision-making bodies. International staff and their family members are offered courses of Estonian language and culture, and leisure activities; and the academic club Dorpater Dozentenabend meets regularly. Estonian employees are offered foreign language courses, and there are also programmes introducing other cultures. In institutes,

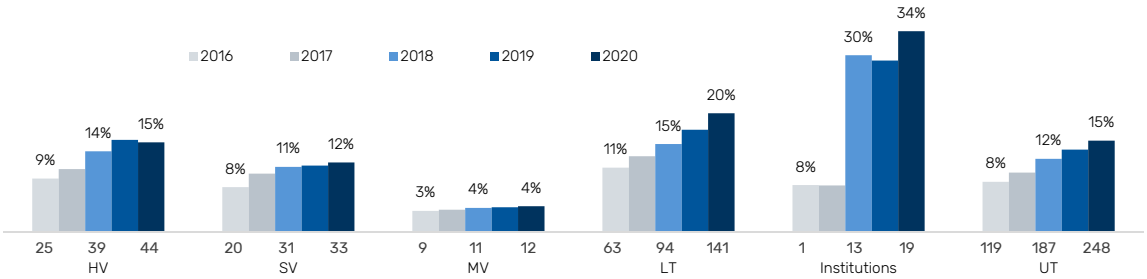

Figure 11. Percentage and number of international academic employees (FTE) by faculties 2016–2020

internationalisation contact persons help introduce the UT to international staff. Tartu Welcome Centre, created in 2019 with the active participation of the UT, helps international staff and their families adapt and deal with matters outside the UT (see also standard 12).

5.5. Staff mobility

The UT encourages employees to gain international experience. In the evaluation of academic staff, also the completion of professional continuing education abroad and leading large-scale international collaboration projects are taken into account. Diverse opportunities are provided for professional development abroad through various programmes and cooperation agreements. For example, international grant opportunities are communicated by means of the grant matching tool that uses the Research Professional database. Mobility-related activities are coordinated by the International Cooperation and Protocol Office.

In 2016–2020, about 20% of academic staff participated in mobility. Mobility to other Erasmus+ countries (see "Outgoing mobility" in figure 12) is to a large extent for the purpose of professional training, mobility to the UT (see "Incoming mobility" in figure 12) is mostly for teaching purposes. The number of researcher exchanges funded under bilateral agreements has decreased as opportunities offered by EU programmes have increased. The Covid-19 pandemic also affects staff mobility.

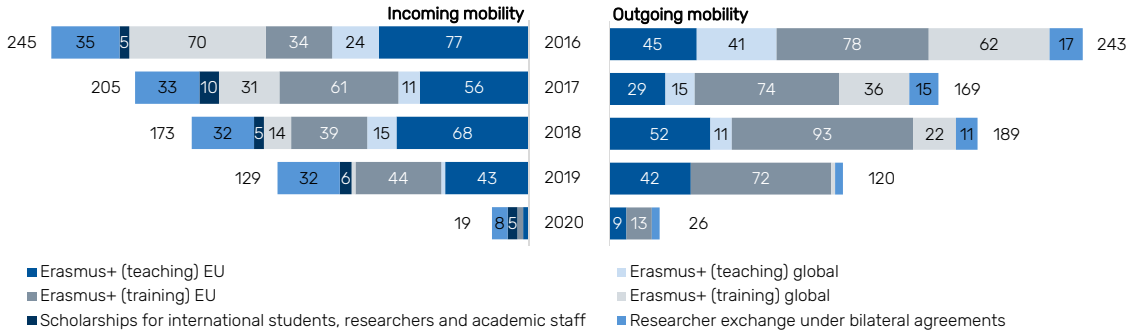

Figure 12. Number of employees participating in mobility under centrally coordinated programmes 2016–2020

Strengths

- A strong network of partners enables the UT to increase its international visibility, broaden its geography of cooperation and participate in European research and higher education policy-making.
- International staff and their family members are provided systematic opportunities to participate in Estonian language courses and a support system to help them settle in Estonia.

Development activities

- In case of curricula where the mobility window has not yet become fully functional, the content of studies will be coordinated with international universities for the 2022/2023 academic year. By the end of 2022, the descriptions of mobility window modules are presented to students on the website.
- As of the 2022/2023 academic year, more English-taught courses are offered in specialisations where the choice of courses available for international visiting students is smaller than the standard semester volume.
- Induction guidelines and a training programme will be developed by the end of 2022 to provide more consistent advice to international staff of different academic units.

6. TEACHING STAFF

Standard. Teaching is conducted by a sufficient number of professionally competent members of the teaching staff who support the development of learners and value their own continuous development.

One goal of A2020 was to implement an academic career model that motivates the starting research staff and values the experienced ones. The importance of international high-level academic staff is also emphasised in A2025.

On 1 September 2019, amendments to the Higher Education Act took force in Estonia, one aim of which was to modernise the universities' career models. At the UT, a committee comprising faculties' representatives started developing the new career model in spring 2017. The committee's proposals were introduced and thoroughly discussed in academic units and decision-making bodies, and the senate approved the new career model in June 2020. The new career model has been used since 1 January 2021.

The main documents which guide the work of UT academic staff, including teaching, are the job descriptions of academic staff, regulations for recruitment of academic staff, regulations for evaluation of academic staff, regulations for giving recognition, study regulations, statutes of curriculum and the good practice of teaching.

6.1. Statistics of teaching staff

The age structure of academic staff and the proportion of young teaching staff members indicate the sustainability of teaching. The average age of employees has not significantly increased from 2016 to 2020, which confirms that new young employees have joined our ranks. The average age has increased in the teacher's position, where the UT is lagging behind general education schools in terms of the average salary level, so the teacher's position at the university is not attractive for young people.

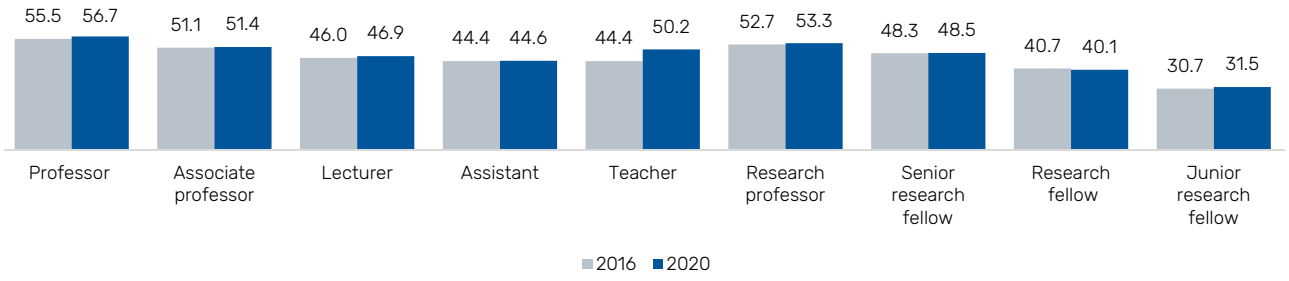

Figure 13. The average age of academic staff in 2016 and 2020

The percentage of women in different positions has remained more or less the same over the years. From 2016 to 2020, the percentage of women increased among research professors and decreased among junior research fellows.

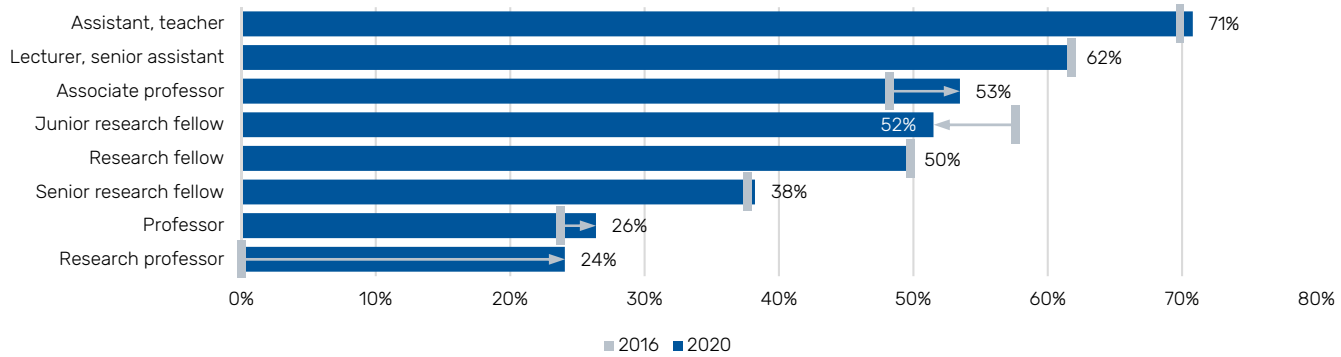

Figure 14. Percentage of women in different positions in 2016 and 2020

70% of academic staff (75% FTE) have a doctoral degree. All professors, associate professors, senior research fellows and research professors (professors and associate professors according to the new career model in force since 2021) have a doctoral degree. In 2018, the UT also introduced a doctoral degree requirement for lecturers, although the national standard does not require this.

In 2020, there were 8.5 students per academic staff member (FTE) at the university (9.3 in 2016).

6.2. Recruitment of academic staff

Academic positions are filled according to the Regulations for Recruitment of Academic Staff. Vacant positions with an indefinite employment contract are filled by public competition, incl. an international competition for higher positions, if the person filling the position is not expected to speak Estonian. Information about vacancies is published on the UT website in Estonian and English.

Persons to fill the positions are chosen by the decision-making bodies of different levels. Candidates to the position of professor, research professor, associate professor and senior research fellow (professor and associate professor in the new career model) are assessed by expert committees comprising members from outside the university, incl. from outside Estonia.

Since 2015, the law requires that academic staff are generally recruited for an indefinite period, leading to a smaller number of competitions. At the same time, the number of qualifying candidates has slightly increased over the period.

Table 10. Competition to academic positions 2016–2020

	2016	2017	2018	2019	2020
Number of announced positions	487	549	257	234	164
Number of applicants	597	738	373	560	443
Number of qualified candidates	570	663	285	366	222
Qualified candidates per position	1.2	1.2	1.1	1.6	1.4

In April 2021, the senate approved the promotion requirements, giving the best employees an opportunity to progress in their careers without passing a public competition. The evaluation committee can make the promotion proposal, and the promotion is decided by the respective decision-making body: the faculty council or the senate.

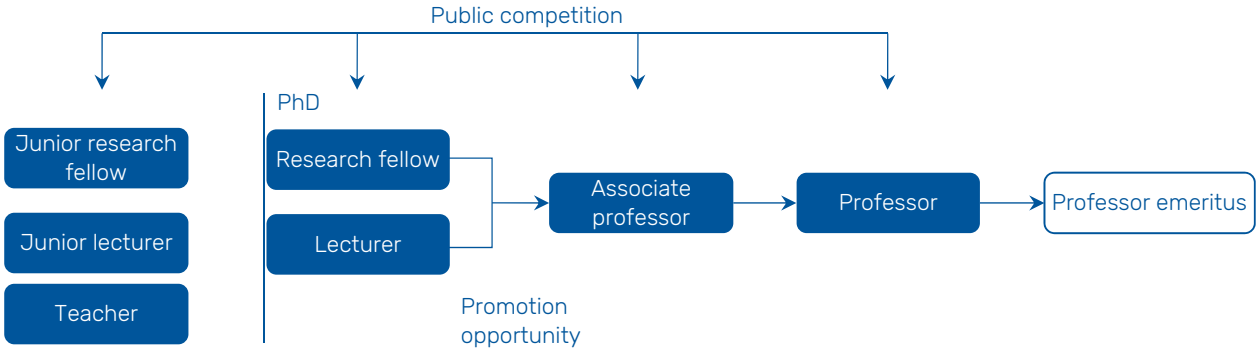

Figure 15. New career model in force since 2021

On 1 August 2022, the doctoral reform takes effect, giving all doctoral students the opportunity to start working as a junior research fellow. This is expected to increase young people's interest in doctoral studies and support ensuring the new generation of researchers (on the doctoral reform, see annex 2).

6.3. Evaluation

In the course of evaluation, the employee's suitability to the position and the employee's performance are assessed to ensure that the employee is suitable for the position, support the employee's development and career and identify further training needs. In evaluation, employees can get feedback on their performance, promotion opportunities and possible shortcomings. The evaluation requirement is based on the Higher Education Act and the Organisation of Research and Development Act.

Systematic evaluation started at the end of 2019, as only academic staff with indefinite employment contracts are subject to evaluation, and until 2015, the employment contracts of academic staff were fixed-term by law. The principles and procedure of evaluation were developed in cooperation with academic units, and discussions were held to find solutions for making the evaluation a tool to support staff development and unit management. To support the evaluation system, training courses have been organised for the members of evaluation committees and employees subject to evaluation. From 2019 to 2020, 238 academic staff were evaluated, five of whom received a negative decision. In the latter case,

- an action plan to remedy the shortcomings and the time for a repeat evaluation were agreed upon;
- the employment contract was terminated; or
- the employee's transition to a more suitable academic position (with lower requirements and different duties) was agreed upon.

In the evaluation of academic staff, all four principal duties are assessed:

- teaching and activities related to the administration and development of teaching;
- research, development and creative activities;
- participation in the university's governance and institutional development; and
- social and public activities.

These duties have been described in more detail in the job descriptions. In the course of evaluation, also the employees assess their professional performance, including by analysing the measures they have taken to ensure the quality of teaching. The teaching staff member prepares the self-reflection based on both student feedback and the good practice of teaching, choosing one or two of the most important principles for their teaching (see also standard 8). The self-reflection includes an overview of the teaching staff member's understanding of teaching – the so-called teaching philosophy – and an analysis of everyday teaching activities and development as a teacher. In assessing teaching activities, the academic developer supports the work of the evaluation committee. Feedback is also sought from the programme director. If an academic staff member regularly involved in teaching is evaluated, a representative of the students with the right to speak and whose appointment is organised by the Student Union is invited to the committee.

6.4. Improvement of teaching and supervising skills

One of the goals of A2025 is an inspiring learning environment with excellent quality of instruction at its core.

The UT has a functioning system of teaching and supervising skills for teaching staff: the summer academy, grant academy, training courses on the development of teaching skills and general competencies, e-learning afternoons, meetings of collegial communities, and conferences on teaching take place regularly. In addition, academic units, institutions or working groups can order customised training courses and seminars; also, individual and group counselling takes place.

Academic staff members have the opportunity to take a sabbatical semester to improve their professional skills or engage in research and development or creative activities. After the term of office in managerial duties, academic staff members can benefit from a paid release time from work to refresh their professional academic competence.

To develop teaching and supervising skills, the UT offers a wide range of courses, for instance on learning and teaching in higher education, self-expression, analysis of feedback, promoting community cohesion in e-learning, as well as supporting the student in case of excessive anxiety and stress (see also standard 9).

The participation of teaching staff in in-service training or other forms of teaching skills development and professional development has steadily increased in the period of evaluations. 44% of academic staff have participated in training activities supporting the development of teaching skills for at least six hours in the past five years. By faculties, the employees of the Faculty of Social Sciences are the most active to participate in courses (65%), and the employees of the Faculty of Science and Technology are the least active (28%). The average (median) number of training hours among academic staff members with an active employment relationship was 52 (incl. 62 among teaching staff only).

Table 11. Participation of academic staff (teaching staff only) in teaching-related courses by faculties (at least six hours) 2016–2020

Faculty	Not participated in teaching-related courses	Participated in teaching-related courses	Total persons	% participating in courses
HV	77	151	228	66
SV	77	175	252	69
MV	160	161	321	50
LT	113	85	198	43
Total	427	572	999	57

As a key performance indicator of A2025, the UT has set the goal that by 2025, at least 50% of all academic staff have participated in teaching-related training courses.

To improve teaching quality, including to launch a teaching development consulting service and develop a sustainable system of teaching and supervision skills of teaching staff, four faculty-based positions of academic developers and four faculty-based positions of instructional designers were created in 2016. In the context of the spread of Covid-19, requiring a quick transition to distance learning and the application of new methods and ways of teaching, the role of academic developers and instructional designers clearly showed the need for this kind of support. In distance learning, teaching staff needed help both with the technical issues and matters concerning the content and organisation of teaching.

Since 2015, UT teaching staff can apply for the scholarship of teaching and learning to develop and research their teaching. Each year, 12 teaching staff members are chosen to get a scholarship for two years to develop and analyse

their teaching practices and share their experiences. By September 2021, 84 teaching staff members had received the scholarship.

To prioritise good teaching, the UT gives out four teaching staff of the year awards each year.

Also, the annual conference "From Lecturer to Lecturer" takes place, focusing on exchanging teaching-related experiences and sharing new ideas. In the past three years, the "Visit a colleague!" week has been organised, allowing teaching staff members to visit each other's lectures.

Strengths

- A range of opportunities has been created for teaching staff to develop their teaching skills and courses, incl. a central support system, training courses and the scholarship of teaching and learning, which enables in-depth research into one's own teaching.
- A training programme is in place to support the evaluation of academic staff, and teaching staff members are offered advice on preparing for the evaluation process.
- Research-based teaching is supported by the obligation of all teaching staff (except teachers of practical courses) to do research.
- The career model, created in collaboration with faculties, gives the best employees an opportunity to progress in their careers without passing a public competition.

Development activities

- To support new teaching staff and enhance their teaching competence, a compulsory basic course on teaching will be added to UT bylaws.
- The doctoral reform will be carried out.
- The UT continues negotiations with the government about increasing research and higher education funding to improve the competitiveness of the salaries of academic staff. The budget committee analyses possibilities to raise salaries and makes respective proposals every year.

7. STUDY PROGRAMME

Standard. Study programmes are designed and developed, taking into account the expectations of stakeholders, higher education and professional standards, and trends in the relevant fields. The objectives of study programmes, modules and courses and their planned learning outcomes are specific and coherent. The study programmes support creativity, entrepreneurship and development of other general competencies.

In A2025, the UT has set the goal to constantly assess and develop study programmes (curricula) to make them meet the needs of students and society.

The organisation of degree studies proceeds from national legislation and various UT bylaws. On the national level, the requirements for the curricula and the quality of the studies have been established by the Higher Education Act and the Higher Education Standard. At the UT, activities related to teaching, incl. curricula, are regulated by the Study Regulations, Regulations for Doctoral Studies, Statutes of Curriculum and other bylaws related to teaching and studies. The Statutes of Curriculum establish the procedure for opening, managing and closing curricula and the requirements for their structure, content and quality. This ensures that the curricula comply with the objectives of UT's activities and requirements established in UT bylaws and Estonian and EU legislation.

Curricula are developed and changed in line with the UT statutes and goals and courses of action of the strategic plan. The most important prerequisites of the decision to open or close a curriculum are the level of research, labour market demand and learners' interest.

Teaching and studies of the first and second level of higher education are managed by the vice rector for academic affairs. Doctoral studies are in the field of responsibility of the vice rector for research. The Office of Academic Affairs coordinates the development of curricula and is responsible for the drafting of the bylaws and guidelines for degree studies as well as for monitoring compliance with them.

7.1. Opening a curriculum

To ensure that the opening of curricula is purposeful and based on the needs of society, the Statutes of Curriculum provide that the preconditions of opening a curriculum are sufficient academic and material resources and a clearly justified need. A precondition for opening a doctoral curriculum is that a positively evaluated research field related to the objectives of the curriculum exists at the UT.

To ensure that the opening of new curricula is justified and in line with the UT's strategic goals, the faculty council must submit a preliminary proposal to the vice rector for academic affairs before compiling the draft curriculum, at least 1.5 years before the planned start of studies. The preliminary proposal sets out

- the objectives, learning outcomes and a brief description of the curriculum;
- the reasoning for the need for the curriculum;
- an analysis of potential students, their interests and needs;
- an analysis of the employment perspectives of graduates;
- a comparison with existing UT curricula and the curricula of other HEIs in Estonia and the neighbouring countries;
- a list of cooperation partners;
- a description of resources.

If, as a result of the discussion at the academic affairs committee, the vice rector for academic affairs finds that the preliminary proposal to open a curriculum meets the requirements, the faculty council submits a proposal to open a curriculum to the senate at least one year before the planned start of studies. The proposal must also include the assessments of potential target and interest groups (i.e. professional associations, ministries or future employers). An additional precondition for opening a foreign-language curriculum, incl. a joint curriculum, is its international competitiveness. Before a curriculum is opened, similar curricula offered in the region are analysed. It has been agreed in the Language and internationalisation principles that when non-Estonian-taught curricula are opened in the UT's fields of responsibility, the opportunity must remain to study the same specialisation in Estonian.

The Office of Academic Affairs organises the review of the draft curriculum. Reviewers are programme directors related to the field and recommended by the academic affairs committee and students chosen by UTSU. The compliance of the curriculum to the Statutes of Curriculum is verified by specialists at the Degree Studies and Quality Assurance Unit of the Office of Academic Affairs.

Table 12. The number of curricula open for admission 2016/2017–2020/2021

Level of study	2016/17	2017/18	2018/19	2019/20	2020/21
Bachelor's studies	38	38	38	39	39
Professional higher education studies	12	12	12	12	11
Integrated studies	6	6	6	5	5
Master's studies	71	73	72	70	71
Doctoral studies	32	33	33	33	33
Total	159	162	161	159	159

The number of curricula open for admission has not increased, but the number of curricula that currently have students has decreased (207 in 2016, 188 in 2021). When assessing the proposal to open a curriculum, one principle and expectation is that another curriculum will be closed for admission or some curricula with smaller admission numbers are merged.

Table 13. The number of students per curriculum 2016/2017–2020/2021*

Level of study	2016/17	2017/18	2018/19	2019/20	2020/21
Bachelor's studies	99.6	99.9	106.1	110.5	133.8
Professional higher education studies	62.9	65.4	70.5	79.0	82.0
Integrated studies	246.0	240.7	247.3	249.5	253.2
Master's studies	41.4	38.6	45.3	44.9	46.6
Doctoral studies**	35.9	34.2	33.8	33.7	33.4
Total	62.7	60.5	66.5	68.0	72.6

** The calculation is based on all the curricula in which students currently study (incl. those closed for admission).*

*** From the 2022/2023 academic year, there will be eight doctoral programmes (see annex 2).*

7.2. Purposeful curriculum development

The UT uses programme-based management of curricula. It aims to ensure the quality of teaching and its compatibility with the needs of society and to ensure the continuous development of curricula (incl. the organisation of studies, support services and financial issues). The dean of the faculty appoints a programme director for the curriculum and approves the members of the programme council. Interest groups from outside the UT (employers) and students are also involved in the programme council.

In 2019–2021, discussions and development work took place to specify the activities and responsibility of the programme directors. For instance, programme directors were given better opportunities to participate in the selection and evaluation of teaching staff. In addition, the curriculum feedback questionnaire was updated, the curriculum statistics dashboard was created, and the new procedure for internal evaluation was established (see standard 3). Once a month, programme directors' idea mornings take place.

In 2017, the UT started to use the method of faculties' performance funding, based on the courses of action for improving the quality of teaching agreed in the period of A2020, incl. the prioritisation of the development of general competencies, and national performance targets. In the performance funding of curricula, five best performance criteria of the following six are taken into account:

- the quality of teaching (learners' evaluation of their learning experience and the professional development of teaching staff);
- students' international mobility;
- completed practical training;
- completed courses on general skills (learning skills, entrepreneurship and career competencies);
- interdisciplinarity;
- successful completion of studies.

In addition, the percentage of international students and the volume of private funding are taken into account as faculty-based performance indicators.

In autumn 2018, amendments to the Statutes of Curriculum took effect, which have guided the development of the curricula of the first and second level of study for three years. By the 2020/2021 academic year, all curricula of the first and second level of study had to include the 15 ECTS mobility window (see also standard 5) and entrepreneurship courses, and all bachelor's curricula had to include a practical training of at least 6 ECTS (for the share of practical training and its organisation in curricula, see standard 8). When developing non-Estonian-taught studies, the needs of the Estonian labour market and economy must be taken into account, and all English-taught curricula of at least two years must include at least 6 ECTS of courses of Estonian language and culture for international students.

In 2019 and 2020, the curricula were analysed in workshops for programme directors, teaching staff and students, following the principle of constructive alignment. Particular attention was paid to whether learning outcomes and the methods of study and assessment suited the first and second level of higher education. When giving feedback on courses, 93–94% of students fully or partially agreed that assessment was closely related to the teaching (see standard 8).

From 2021, the annual internal evaluation of teaching supports curriculum development (see standard 3).

7.3. Development of general competencies

In A2025, the UT has set a goal to develop the creativity, enterprising spirit, critical thinking as well as the cooperation, learning, self-management, digital and other future skills of students. One way to develop general competencies is by using active, real-life based teaching methods that support student involvement. The development of general competencies is also supported by participation in student and sports organisations, cultural activities, professional associations and student councils, for which the UT has created numerous opportunities. Starting one's own business, participating in a research project, learning mobility and acting as a leader in community or university life in the course of project-based internship also play an important role in the learning experience.

When the new curriculum feedback questionnaire was compiled (see standard 8), the UT defined competencies that need to be developed in higher education. The development of courses focuses on supporting the development of these competencies. A2025 also included the aim to promote the attitude supporting the global sustainable development goals among students and provide the knowledge and skills required for that.

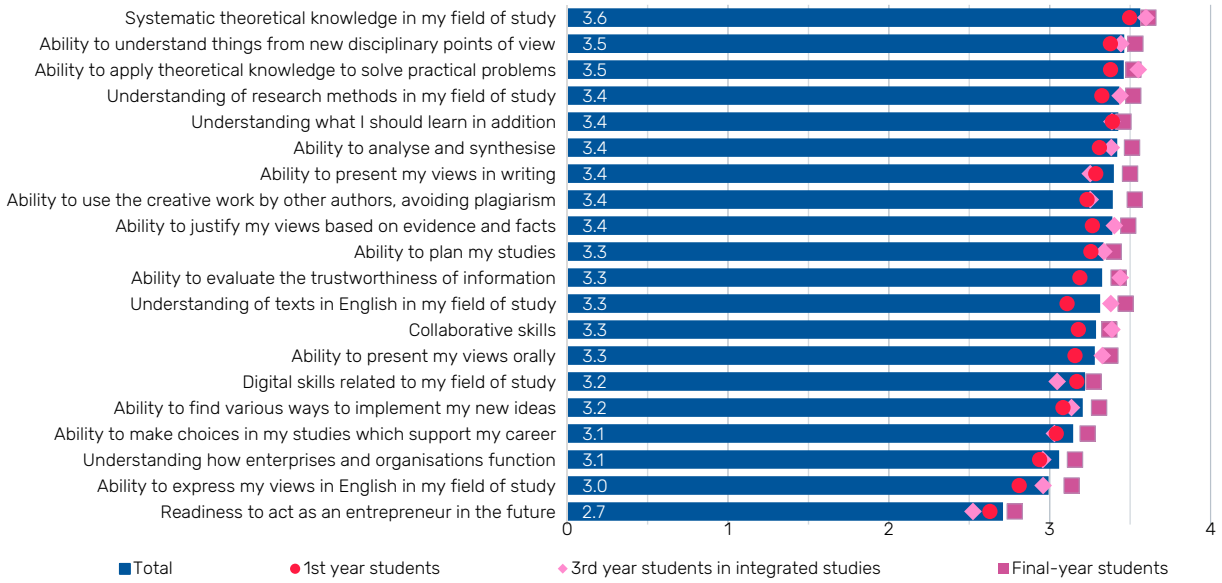

Figure 16. Students' assessment of the development of their competencies in the 2021 curriculum feedback questionnaire (n = 2,926). Scale: 4 = developed a lot, 3 = developed to some extent, 2 = did not develop, 1 = became worse

The Centre for Digital Humanities and Information Society created in 2018 supports the use of digital opportunities in the humanities. Master's students can take part in the digital humanities elective module; bachelor's students can choose the digital humanities minor specialisation. The Centre for Educational Technology develops tools for assessing the digital competencies of teaching staff and students. From the IT Academy development projects' action, the UT received more than 600,000 euros of total funding in 2019–2021 for ten projects improving digital competencies and ICT capacity, involving 72 curricula. (For more information about developing digital competencies and general skills, see standard 8.)

The UT development fund has also supported the development of entrepreneurship courses. The Centre for Entrepreneurship and Innovation has helped organise and coordinate cooperation, and the Chair of Entrepreneurship offers entrepreneurship courses. In the framework of the project "Edu ja tegu", the UT has led the development of entrepreneurship courses in higher education and offers activity-based entrepreneurship courses and pre-incubation services under the Startup Lab. In the 2021 curriculum feedback questionnaire, 55% of respondents said that the competencies that give them the readiness to act as an entrepreneur in the future had developed a lot or to some extent during their studies.

The study of the results of University of Tartu doctoral studies (2010-2016) highlighted the doctoral students' wish to acquire practical and transferable skills and apply their knowledge to solve cross-sectoral problems. Based on this feedback, the UT set out to update the module of university-wide electives, which, at the moment of the questionnaire done in the study, included 76 courses. Since the 2018/2019 academic year, seven university-wide electives support the

development of transferable skills of doctoral students. The courses were developed in both Estonian and English and contribute to the development of academic competencies, such as communication, teaching and supervising skills, in addition to entrepreneurial competence and managerial skills. Also, ASTRA doctoral schools support the development of doctoral students' general competencies by organising courses on time management and stress management, public speaking, etc.

7.4. Individual choices and satisfaction with curriculum

In most bachelor's curricula, students can choose a minor specialisation in addition to their major specialisation. By the programme director's decision and based on the learning outcomes of the curriculum and modules and the student's interests, courses in the student's individual curriculum can be replaced in the volume of up to 30 ECTS. This allows adapting the curriculum to talented students or those with previous academic or professional experience in the field.

The curriculum feedback questionnaire of 2020 and 2021 (see standard 8) showed that around 95% of final-year students felt they had chosen the right curriculum, 85% were satisfied with the choices they could make within their curriculum, and the same percentage of respondents agreed that courses were ordered logically. The results of the course feedback survey of the past three years show that 81–83% of respondents find that the workload of the course matched the number of credits received for the course.

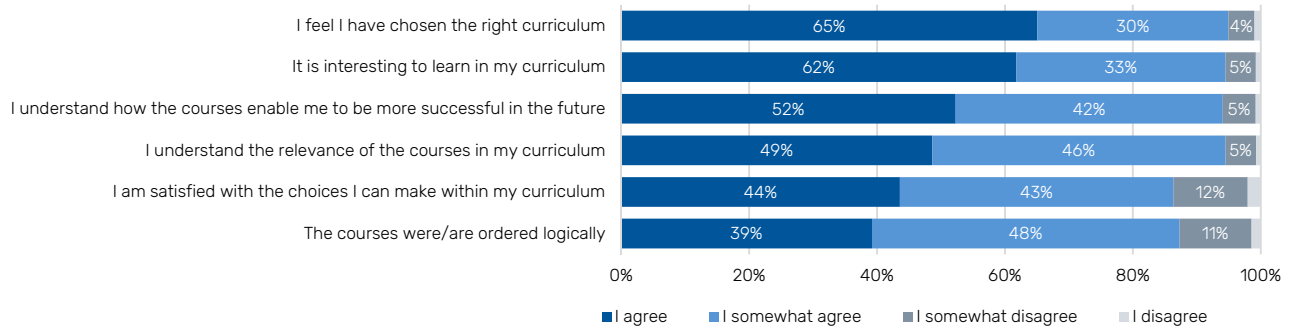

Figure 17. Students' assessment of the curriculum in the 2021 curriculum feedback questionnaire (n = 2,936)

Strengths

- The opening of new curricula is well-targeted, comprehensive and transparent.
- The programme-based management of curricula is systematic and effective; programme directors are guided in their work by the development objectives of the curriculum and involve the programme council, the teaching staff and students of the curriculum in the development activities.
- The performance funding of curricula, the development fund and international funding measures support the development of general competencies.
- Internal teaching quality surveys enable programme directors and programme councils to continuously analyse the content and organisation of studies of the curriculum, as well as the indicators that reflect strategic development trends.

Development activities

- According to the curriculum feedback questionnaire, the development of entrepreneurial skills has been the slowest compared to other skills. In 2022, feedback on the entrepreneurship courses is analysed and used as a basis for further development of the courses.
- Sustainable development goals are integrated into the curricula in line with the UT action plan in 2022–2025.

8. LEARNING AND TEACHING

Standard. Admission requirements and procedures ensure fair access to higher education and the formation of a motivated student body. The HEI systemically implements a student-centred approach that guides students to take responsibility for their studies and career planning and supports creativity and innovation. Graduates of the HEI have professional knowledge and social skills that make them competitive both nationally and internationally.

A2025 values motivated students with diverse learning experience, excellent quality of teaching, and learning opportunities supporting students' personal development.

8.1. Student admissions

Admission of students is organised based on the admission rules for the first and second level of higher education and the admission rules for doctoral studies, approved by the senate. Students are admitted through an open competition once a year to the first and second level of study, and four times a year to doctoral studies. The admission requirements (incl. the schedule, descriptions of entrance exams and assessment criteria) are made public to the applicants on the UT's website at least two months (in doctoral studies at least one month) before the application deadline. For the admission of Estonian citizens, the national admission information system (SAIS) is used, and for the admission of international students, the DreamApply information system. The admission process in SAIS is easy for both the applicant and the UT – it allows to make an enquiry of the applicant's personal and educational data from public registers and only 10% of applicants must submit additional documents.

It is possible to study in regular or block mode study and as full-time or part-time students at the UT. Block mode study enables to combine studies with work or other commitments without compromising on the quality of studies. In the 2020/2021 academic year, students were admitted to block mode study in 39 curricula.

Admissions are organised and coordinated by the Office of Academic Affairs. Applicants are assessed by admission committees formed in institutes and colleges for admissions to the curricula. To ensure quality, the minimum threshold for application to all levels of study is 66 points out of 100. The admission rules set out the conditions under which an applicant can challenge the result of an entrance exam, the assessment of a written paper, etc.

In addition to written and/or oral entrance exams, the results of the Estonian state examinations are used for the first level of study, and the average grade of the previous level of study for the master's level, often in combination with the entrance exam. As special conditions of admission, the UT takes into account the applicant's participation in Olympiads, outstanding academic test results as well as the excellent sports achievements of up to ten applicants. An analysis of admission results showed that better state examination results, particularly the result in broad mathematics, are associated with better academic progress and lower dropout rate. In A2025, the UT has set the target to make the involvement of the talented more systematic and create new learning opportunities for them. Of the new school-leavers who in 2019 passed the state examination both in Estonian and mathematics with at least 90 points out of 100 and continued their studies in Estonia, 68% came to study at the UT.

To support applicants in making informed career choices, the UT organises open doors days and other information events. All those interested can visit classes as student shadows almost round the year. In 2019, the programme "Talents to Tartu" was launched with an aim to offer to up to one hundred talented young Estonian people a wider than usual range of learning opportunities for personal fulfilment in a research, entrepreneurship or young teacher project.

At the beginning of the academic year, faculties and institutes hold opening ceremonies and information sessions, where students get important information about studying at the UT, meet lecturers, fellow students and tutors of their curriculum (see standard 10).

8.2. Recognition of foreign qualifications

Academic recognition of foreign qualifications is carried out in accordance with the Lisbon Convention, the treaties (between Estonia, Latvia and Lithuania, Estonia and China, and Estonia and Ukraine), and the Government regulation "Conditions and procedure for the assessment and academic recognition of documents attesting education completed in a foreign state, and for the use of a title of qualification acquired in the educational system of a foreign state". Foreign qualifications are assessed in cooperation with the Estonian ENIC/NARIC, a centre that organises regular training and advises the student admissions staff who conduct the initial assessment of applicants' qualifications. If necessary, the student admissions staff send documents certifying a foreign qualification to the Estonian ENIC/NARIC for assessment.

Surveys conducted among international students show that they are very satisfied with the organisation of admission and the studies at the UT. In 2019, the UT received the award for admission process in the student satisfaction survey organised by StudyPortals, the largest online platform introducing universities' study programmes. In the satisfaction survey carried out in 2016, the UT also received the highest result (at least 9.5 points out of 10: Award for Outstanding International Student Satisfaction).

8.3. Digital learning methods and tools

An objective of A2025 is to use and increase the UT's strengths in e-learning. Teaching staff are guided to create hybrid and online courses, at the same time complying with the quality criteria for e-courses, and apply for the e-course quality label. From 2016–2021, the quality label was awarded to 68 e-courses of the UT. The UT's e-courses have repeatedly received the title "E-course of the year".

At least 76% of the UT's courses in 2020 were taught either partially or fully online; therefore, each student experiences e-learning every day. In 2020, the E-learner's handbook was compiled to share information related to e-learning to students and teach them to use Moodle, incl. to customise the Moodle dashboard to have a better overview of their courses.

The e-learning opportunities used at the UT include e-courses in the Moodle learning environment, online learning materials (incl. audio and video lectures), e-portfolios, electronic surveys, online communication (forums, webinars, etc.) and collaboration tools (wiki, blog, collaborative writing tools, etc.).

Moodle is used for presenting the course materials, for learners' communication with lecturers and other learners, for facilitating learning by means of various tools, for assessing the learners and for managing the course. Moodle is integrated with the SIS, which makes it possible to create blank Moodle courses in the SIS, to add students registered for a course in the SIS to the Moodle course, and to import the final grade of the course into SIS exam results report. Moodle is also integrated with the Panopto video content management system, the Mahara e-portfolio environment and various webinar tools (BigBlueButton, MS Teams, Zoom), which are actively used for online contact learning as well as for hybrid learning to enable learners to participate in the learning process wherever they are. In spring 2020, the use of webinars and video lectures for teaching increased dramatically due to restrictions imposed on face-to-face studies caused by the spread of Covid-19. Thus, a total of 7,520 videos were recorded in Panopto or uploaded in the Panopto server in 2020 (in comparison, on average 1,500 videos per year had been added over the period 2017–2019).

Table 14. Use of digital learning in the UT 2016–2020

	2016	2017	2018	2019	2020
Web-based courses in degree studies	2,413	2,737	3,738	4,892	5,282
percentage of all courses	30%	35%	49%	69%	76%
number of participants	64,996	74,789	100,076	125,522	133,720
Number of Moodle courses	3,910	5,010	6,054	7,421	8,611
Number of videos (UTTV, Panopto)	4,260	6,402	11,316	13,189	21,067

Both Moodle and the website creation tool Sisu@UT include the content creator H5P, which allows to make learning materials interactive and provides learners with a variety of self-assessment options. For example, to facilitate learning, the Faculty of Medicine has introduced digital micropreparations, which have been recognised by students as the Deed of the Year.

To support the development of digital skills, the university has compiled the digital competence learning resources, which can be used for independent learning or integrated into various courses, and the self-assessment test of digital competence, which allows to estimate which digital knowledge and skills need development. For the development of general digital skills, the course "Digital Citizen in Information Society" (3 ECTS) was prepared, and two new university-wide digital competence courses of 6 ECTS are being developed ("Computer science worldview" and "Content creation tools and skills"). An annual contest of digital competence learning resources is planned.

8.4. Organisation of practical training

Pursuant to the UT's Statutes of Curriculum, a bachelor's curriculum must contain practical training to the extent of at least 6 ECTS and a curriculum of professional higher education at least 15% of the total volume of the curriculum. In integrated studies and master's curricula, the volume of practical training has not been provided. In the 2020/2021 academic year, 98% of curricula of the first and second level of study that were open for admission included practical training.

For performance-based funding of curricula, practical training courses are evaluated and programme directors can get feedback and advice from experts for further development of practical training. Links to information on the organisation of practical training in different institutes and colleges are gathered on one website to facilitate students' search for a practical training institution. It is possible to do practical training abroad – this is coordinated and the relevant information is shared by the Office of Academic Affairs.

In the course of preparing A2025, the importance of practical training for the development of future or general skills was emphasised. New forms of practical training are constantly developed and improved to provide students with opportunities to develop professional and general competencies in an integrated way. From 2020, the students of

all specialisations of the UT and other universities can participate in project-based internship course where teams of students of several curricula try to solve assignments submitted by an enterprise, organisation or person.

In the programme "Supporting the cooperation between employers and educational institutions in the development of practical training system", the practical training supervisors of practical training institutions can take part in training courses, a virtual traineeship platform and a web-based (assessment) portfolio is worked out, and a model for knowledge transfer (industrial) master's programme and workplace learning is developed. In the framework of the PRÕM programme, four academic units participate in the process of assessment and recognition of practical training.

At the end of practical training, a practical training report is submitted, in which feedback is given to the institution and the overall organisation of practical training. In 2021, a feedback questionnaire on practical training courses was made, which makes the collecting of feedback more efficient and allows students to evaluate their practical training experience and suggest improvements. The questionnaire gives input for improvement in three aspects: feedback to the institution, feedback to the university and an evaluation of the impact of practical training. For the results of evaluation of practical training courses, see standard 7.

8.5. Student feedback

A2025 aims, for assuring of the quality of teaching and learning, to create an integrated feedback system and evaluate the learners' activeness, engagement and a learning environment that supports development.

The new course feedback survey, used since the spring semester of 2018/2019, was compiled with the aim of directing teaching staff to develop their courses and students to evaluate their involvement in the learning process. Guidelines have been prepared for the teaching staff and academic developers organise workshops and help teaching staff in interpreting and using the feedback.

Each student must assess at least four courses per semester (one course, in doctoral studies) but may give feedback on all courses they have taken. While earlier, students themselves selected the courses for evaluation, from the spring semester of 2020/2021, the four courses to give feedback on are selected by the SIS using an algorithm. This gives a sufficient number of feedback providers for a larger amount of courses and makes the sample of students more representative.

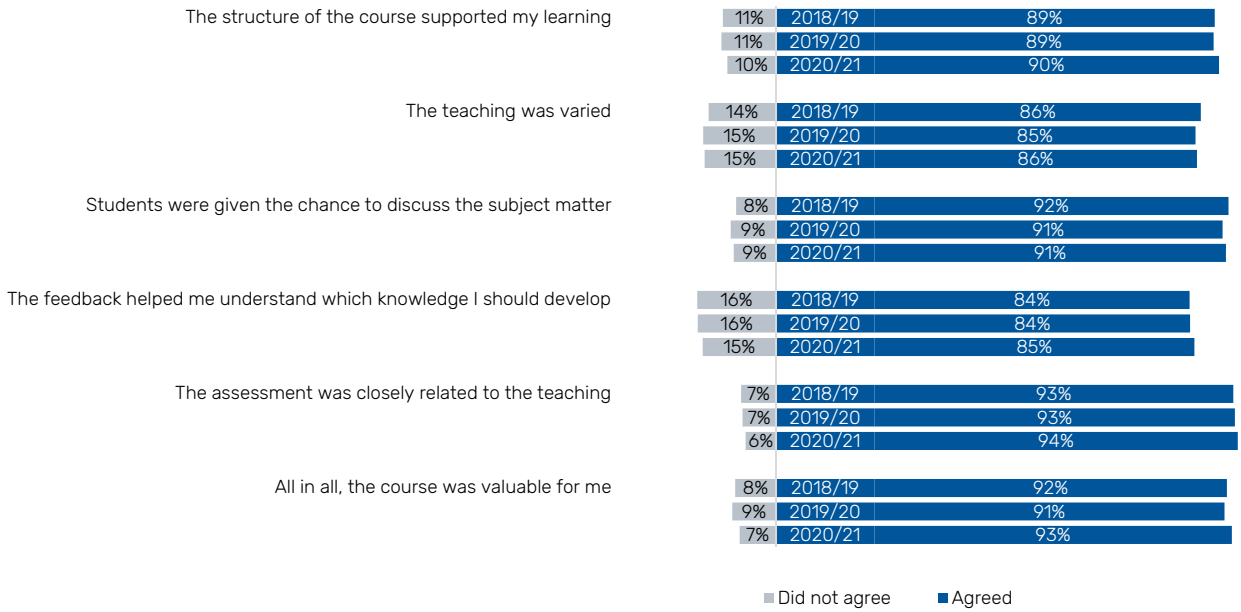

Figure 18. Course feedback survey results 2018/2019–2020/2021

Note. The first five statements combined form one factor – evaluation of teaching – and measure the most important aspects of teaching quality. The last statement reflects a general evaluation. In addition, the feedback survey uses statements measuring the engagement of the learner.

Course feedback survey results are taken into account by

- the teaching staff for enhancing the quality of teaching the course;
- the programme director and programme council for internal evaluation and development of the curriculum;
- head of the academic unit when evaluating the performance of the teaching staff, incl. for assessing the suitability of a teaching or research staff member to a position, development appraisals, evaluation, planning the continuing education of teaching staff and the recognition of teaching staff.

When designing the curriculum feedback questionnaire, which is in use since the spring semester of 2019/2020, consideration was given to such factors influencing the teaching and learning quality that the UT could change. The questions concerned the alignment and structure of curriculum, the organisation of studies and learning environment, and the work of support systems. They also give students the opportunity to analyse their learning experience so far: the development of general competencies, self-efficacy, engagement and motivation to continue their studies. Programme directors use the results of the curriculum feedback survey to develop the curriculum to make suggestions for improving the organisation of studies during internal evaluation, and the Office of Academic Affairs uses the results to develop support services.

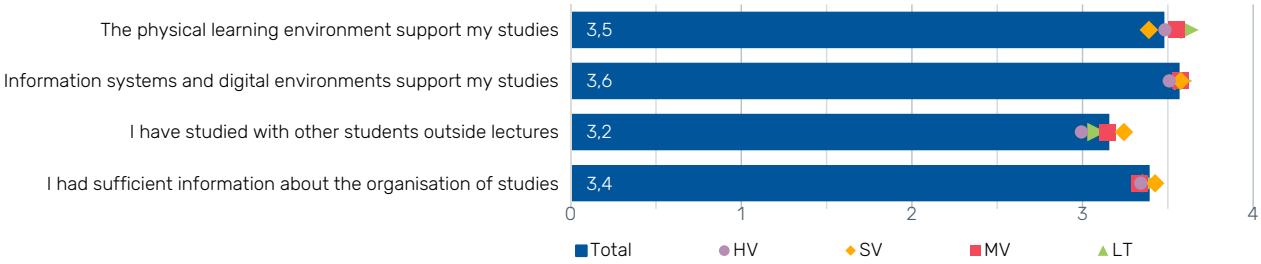

Figure 19. Average assessment of the organisation of studies and learning environment based on the 2021 curriculum feedback questionnaire (n = 2,930)

Alumni feedback is based on all-Estonian alumni survey conducted by the MoER once in every three years. The most recent alumni survey covers the UT graduates of 2016, 2017 and 2018.[4] The results of the survey are used for the internal evaluation of curricula and the following development activities.

Strengths

- The admission process is quick, easy and transparent for both the applicant and the UT. Over the years, the Student Admissions unit has gathered information on the education systems and qualifications of different countries, which provides a solid basis for advising applicants and assessing foreign qualifications.
- In student feedback surveys, students assess the research-based, modern approach to learning and the development of general competencies.
- Online learning is supported by instructional designers, e-learning support specialists and technological solutions, which have been used as a model for developing the Moodle for other HEIs at the national level.

Development activities

- To support the development of self-directed learning (incl. for the progress review of doctoral students), a learning pathway platform will be launched in 2023. The platform will allow learners to monitor their progress, prepare self-analyses, submit work plans and reports; and the supervisor and reviewer can see the student's progress, give feedback and organise assessment.
- To improve practical training activities and the related information, a practical training feedback questionnaire will be introduced in 2022.

[4] *See survey results on statistics dashboard under "Alumni feedback".*

9. STUDENT ASSESSMENT

Standard. Assessments of students, including recognition of their prior learning and work experiences, support the process of learning and are consistent with expected learning outcomes. Objective and reliable assessment is ensured.

9.1. Assessment methods and criteria

Student assessment is based on the regulation "Uniform grading system in higher education and the conditions of and procedure for issuing diplomas and diploma supplements" of the minister of education and research, defining differentiated and non-differentiated assessment, setting the scale of differentiated assessment and the conditions for issuing cum laude diplomas. At the UT, assessment-related topics are regulated by the Study Regulations. The organisation of student assessment and the goals of its development have also been described in the good practice of teaching, which states that the chosen grading method must support deep learning and provide students with relevant and meaningful feedback.

The requirements for taking the assessment, assessment methods and criteria and the formation of the final result are compulsory elements of course information, which must be published in the SIS by 15 April for the courses of the next academic year (by 1 March for non-Estonian studies). Therefore, students are informed of the assessment methods and criteria in a timely manner. By registering for a course, the student assumes the obligation to participate in the assessment of learning outcomes. The grade of the course may be formed in a continuous or final assessment. The technical solution of the SIS allows choosing assessment methods and tasks and specifying separate assessment criteria for each of them.

Each semester, about 3,200 courses are taught under nearly 4,000 syllabuses (one course may be taught in different languages, in both face-to-face and web-based learning). Nearly half of courses are taught by several teaching staff members. In courses with several teaching staff members, written final assessments are used slightly more often than in courses with one teaching staff member (15% and 11%, respectively).

The main goal of assessment is to support students' learning, so assessment must be compatible with learning outcomes. In the course feedback questionnaire, students are asked whether the assessment was related to the teaching. In the course feedback survey of the autumn semester of 2020/2021, 94% of respondents agreed to that (68% strongly agreed and 26% generally agreed).

In Moodle courses, the definition of assessment criteria and the monitoring of the acquisition of learning outcomes are supported by rubrics and marking guides. The results of all graded activities are recorded in the gradebook of a Moodle course where the formation of the final grade has been configured, so students can keep an eye on their progress throughout the course. The teaching staff member can export the final grade from the Moodle course to the SIS results report. Also, Moodle tests and interactive tasks are used to give students self-assessment opportunities. In the course feedback study of the autumn semester of 2020/2021, 54% of respondents fully agreed and 31% partially agreed that the feedback helped them understand which knowledge and skills they should develop further.

Students have the right to contest the grade by contacting the person teaching the course, the faculty's vice dean for academic affairs, the vice rector for academic affairs or the appeals committee comprising representatives of teaching staff and students. The procedure of processing assessment-related disputes has been regulated in the Study Regulations. The procedures (incl. filing an appeal with the appeals committee) have been well defined, and information about them is available for students.

In the performance evaluation of curricula (in the UT's internal funding model), attention is paid to the development of general skills, incl. their reflection in the learning outcomes of courses. This, in turn, influences teaching staff to choose assessment methods in which the acquisition of general skills could also be assessed.

9.2. Development of assessment skills

Teaching-related continuing education for teaching staff is ongoing, funded from the UT budget, i.e. free of charge for participants, and equally accessible. The topic of assessment receives great attention in the basic training course for teaching staff ("Learning and Teaching in Higher Education") taking place each semester. In addition, assessment is discussed in shorter continuing education courses, workshops and guidelines. For instance,

- in 2019–2021, the following continuing education courses took place:
  - "Constructive alignment in curriculum" (workshops for curriculum teams, 10 hours, 12 courses);
  - "Constructive alignment in subject" (4 hours, 4 courses);
  - "Designing and grading the course assignments" (26 hours, 4 courses);
- the topics of the seminar series "E-learning afternoon" have included instructional design in e-course, the opportunities of using the assignment tool, learner assessment in Moodle, etc.;
- since 2018, e-learning experience seminars have been organised for teaching staff. At the experience seminar of 2020, the experiences of online exams were shared; 153 teaching staff members participated;

- teaching staff members can use guidelines for assessment and also tips for adapting assessment for distance learning.

9.3. Assessment of graduation theses and final exams

The organisation of graduation theses and final exams has been established by the Study Regulations. Authors of academic papers must know the referencing rules and the publication procedure of graduation theses. The faculty council approves the requirements for the graduation theses and final exams, the corresponding committees and deadlines. Graduation theses and final exams are assessed by exam committees, which, in the case of curricula giving a professional qualification, must involve members of the professional qualifications committee (the composition of the committees is coordinated with the professional council granting the qualification). Only differentiated assessment is allowed for graduation theses and final exams; graduation theses are assessed in public defence. An alternative to a master's thesis is a master's project, focusing on an applied issue related to the field of study.

Table 15. Curricula with a representative of the professional qualifications committee involved in the final exam committee or thesis defence committee 2020/2021

Level of study	Number of curricula giving a professional qualification	% of curricula giving a professional qualification
Bachelor's studies	6	15
Professional higher education studies	7	41
Integrated studies	2	33
Master's studies	14	15
Total	29	19

The requirements for graduation theses differ by faculties and partly also by academic units. More detailed requirements for the assessed components of the graduation theses are available on the faculties' web pages (in the section "Requirements for graduation theses") and in the description of the course of the final exam or graduation thesis in the SIS. To support the writing of graduation theses, the organisation of graduation thesis seminars and pre-defences has become a good practice.

According to the Study Regulations, since 2017, the university is entitled to check students' written papers with a plagiarism detection system, and, since 2021, to organise tests, exams and defences online using real-time two-way audio-video communication.

9.4. Doctoral students' progress review

A2025 includes the goal to ensure only the best quality instruction for our doctoral students. Since 2005, the admitted doctoral student, the supervisor(s) and the university conclude the doctoral study agreement, which provides that the doctoral student and supervisor(s) proceed from the good practice of doctoral studies in their activities and together compile a plan for the doctoral student's studies and research, i.e. the individual plan. The fulfilment of the doctoral student's individual plan is assessed during progress review.

Since the 2021/2022 academic year, doctoral students' progress review takes place according to the Regulations for Doctoral Studies. The more detailed procedure is described on the faculty level: in the faculty's progress review rules or guidelines. The Regulations for Doctoral Studies provide that if the curriculum is managed by an institute, at least one member of the review committee must be from outside the institute.

The review committee assesses the doctoral student's progress in studies and research, monitoring the fulfilment of both the curriculum and the individual plan. In addition, the review committee gives recommendations on planning research, publishing the results, etc. The positive review of the doctoral student depends on fulfilling the requirements for the study load and the individual plan.

In autumn 2017, the connection between the progress review of doctoral students matriculated in 2005–2016 and the interruption and completion of studies was analysed. The results revealed that negative progress review decisions are rare, but taking academic leave before the progress review, particularly before the first progress review, tends to predict the interruption of studies. Since 2018, doctoral students' progress review takes place twice in the first year and once in the following years, except during the academic leave. The first review, taking place after one semester from matriculation, has a supportive function to ensure the suitability of the doctoral student's research plan and schedule and a functioning cooperation with the supervisor.

The doctoral students who responded to the satisfaction survey in 2020 considered the impact of progress reviews on the advancement of the doctoral thesis to be relatively modest (5.4 out of 10). At the same time, the impact of the progress reviews on the advancement of the doctoral thesis was assessed to be the smallest by doctoral students of the Faculty of Science and Technology, whose graduation rate is the best.

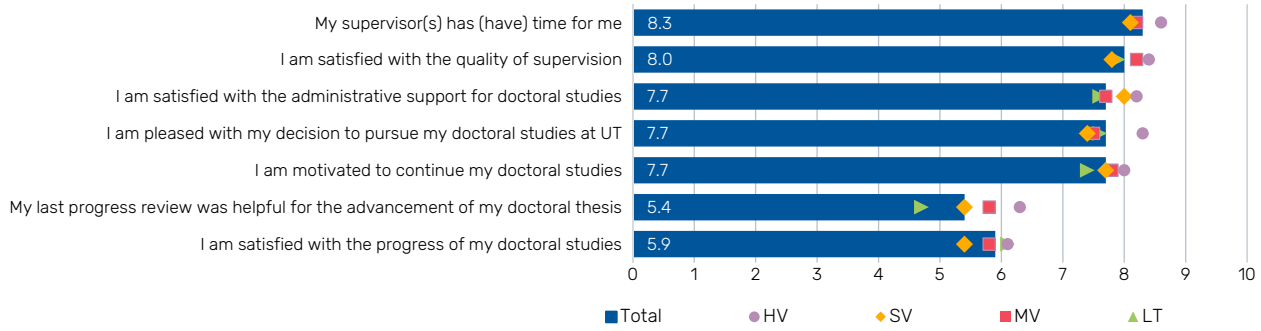

Figure 20. Results of doctoral students' satisfaction survey in 2020, on a scale of 1 to 10 (n = 570)

The Regulations for Doctoral Studies in force from 30 August 2021 give the faculties more freedom to decide how to organise doctoral students' progress reviews to achieve the best results. According to the students' proposal, doctoral students will have the opportunity to give feedback on supervision. So far, it has been a matter for the faculty or institute to decide. The committee has had the right and duty to give recommendations on fulfilling and improving the individual plan, but the new regulations give the committee a better opportunity to intervene if it detects aspects that hinder the progress of the doctoral students, especially in connection with supervision.

9.5. Recognition of prior learning and professional experience

The recognition of prior learning and professional experience (RPL) is regulated by an annex of the Study Regulations. At the UT, prior learning and professional experience can be recognised both in fulfilling admission requirements and completing the curriculum. RPL committees have been formed for the recognition of prior learning and professional experience in all curricula. The acquisition of skills and knowledge obtained through degree studies, other organised studies and professional experience and in the course of everyday activities and leisure time is assessed. In the case of courses(s) and module(s) of another structural unit or cross-unit module(s), the assessment of the committees of all respective curricula is requested.

Table 16. The number of credits applied for and taken into account by RPL 2015/2016–2019/2020

	2015/16	2016/17	2017/18	2018/19	2019/20
Number of credits taken into account	42,074	51,409	50,918	45,799	55,873
Percentage of RPL credits in all credits taken into account	7%	9%	8%	7%	9%
Number of decisions, incl.	2,613	2,753	2,891	2,776	2,395
positive decisions	2,465	2,608	2,708	2,607	2,300
negative decisions	48	51	54	60	32
combined decisions	100	94	129	109	63

In issues related to preparing the application and in curriculum- or course-specific RPL issues, counselling is provided by the RPL counsellors of the structural unit that manages the curriculum. Information about the RPL committee and counsellors is available for students in the SIS under the curriculum information.

Assessment relies on sufficient evidence. The assessment is based on the learner's self-assessment about the achievement of learning outcomes. A template for the learner's self-analysis has been developed and is recommended for all assessments. However, it is mostly used to assess what has been learned in either a job or continuing education, while courses tend to be taken into account based on the description of course content.

Strengths

- The UT has created good opportunities for teaching staff, including visiting teaching staff, to develop their assessment skills.
- The process of appealing decisions relating to the organisation of studies, incl. grades, is clearly regulated.
- RPL assessment and counselling is organised systematically.

Development activities

- Starting from 2023, curriculum and course information is displayed in the SIS so the link between learning outcomes and assessment methods and criteria can be seen.
- To enhance the impact of doctoral students' progress review, and in connection with the entry into force of the national doctoral reform, the organisation of progress reviews will be updated by the 2022/2023 academic year.

10. LEARNING SUPPORT SYSTEMS

Standard. The HEI ensures that all students have access to academic, career and psychological counselling. Individual development and progress of students are monitored and supported.

10.1. Supporting students to reduce the dropout rate

The UT has agreed with the MoER to step up measures to reduce the dropout rate by supporting students' learning. The project "Designing central services to support the learning of University of Tartu students" carried out in 2017 confirmed the understanding that the UT needs to offer services that support learning and reduce dropout on several levels. In the discussions within the university, it was found that the most effective approach is to support students at the start of their studies and in the graduation phase in the learning environment closest to them.

In academic units, academic affairs specialists advise students on issues related to the organisation of studies and programme directors on issues related to the content of studies. Students' feedback reveals that students most often seek help and information from their peers, the university's websites and teaching staff.

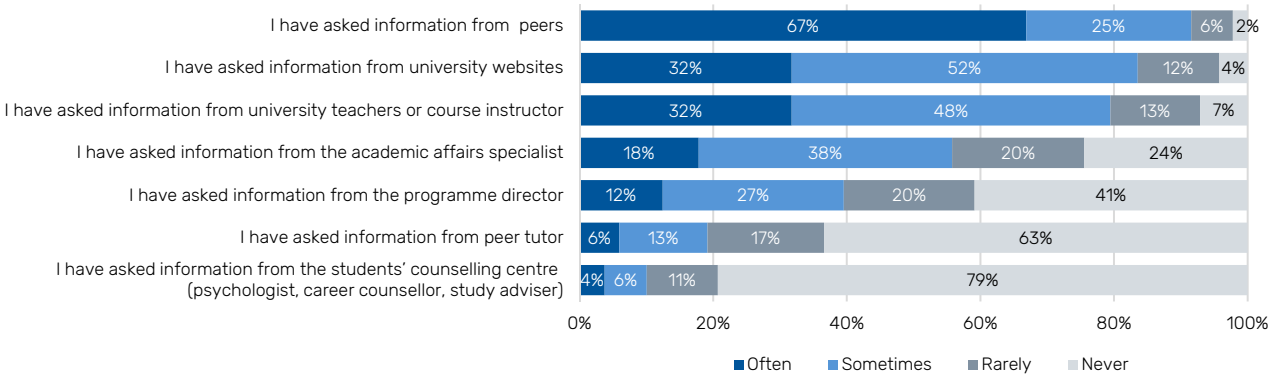

Figure 21. Students' feedback on asking for information based on the 2021 curriculum feedback questionnaire (n = 2,937)

Senior students – tutors – help first-year students get started with their studies and used to university life. Nearly 45% of first-year students have used the help of a tutor. Tutors complete a training course which gives them knowledge about the organisation of studies and helps them develop the social skills a tutor needs. Each year, the Counselling Centre asks first-year students for feedback on tutors' activities and improves and adapts the tutors' training accordingly. The feedback reveals that tutors are very much needed to help first-year students adapt to university life and learn how to succeed at the university. In a project funded from the UT Development Fund, a board game "Edukalt ülikoolis!" was created in 2019. Both tutors and programme directors and teaching staff have used it to share knowledge with first-year students as part of an orientation course or other introductory event.

Looking at the reasons for the interruption of studies indicated by students, the past five years have seen an increase in terminating studies at the student's request (most often due to the wrong choice of specialisation) and a decrease in the termination of studies due to the expiry of the end date of studies. One reason for this is the new Higher Education Act in force since 2019, which, since 2019/2020, allowed the UT to remove the restriction that did not let most students participate in studies during academic leave. On average, 13% of students who interrupt their studies within the academic year continue their studies at the UT under the same or another curriculum in the following academic year.

Since 2019, the UT has developed a learning analytics model aimed at reducing student dropouts and supporting their progress thanks to early detection. The learning analytics model is based on the data from the SIS (in the future also from Moodle) and underlines factors predicting dropout. Analysis revealed that factors that predict dropout include the low admission score, lower grades in the first year, the number of credit points of cancelled registrations and studying part time. The model includes an automatic notification system that alerts the programme director and academic affairs

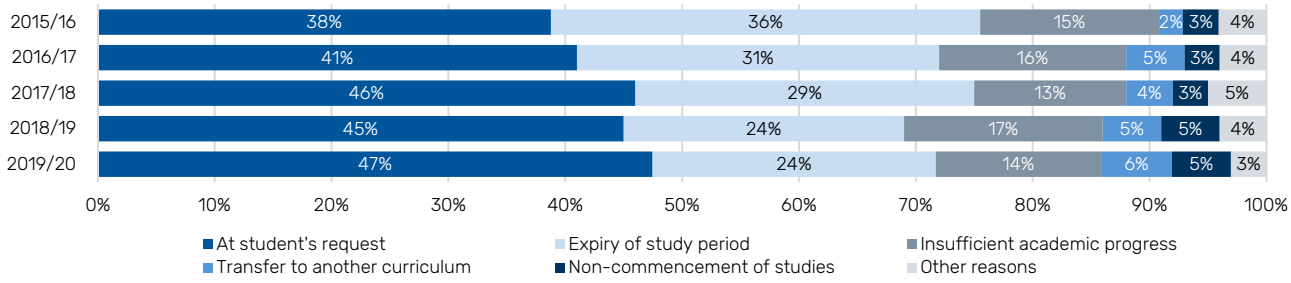

Figure 22. Reasons for exmatriculation (except due to graduation), 2015/2016–2019/2020

specialist of students who need additional attention to successfully manage their studies. The model is planned to be implemented in 2022.

Various measures taken on the level of academic units and curricula to support students' studies (assessment of motivation at admission, introductory events and courses, development seminars, support by teaching assistants in difficult courses, seminars supporting the writing of graduation theses, writing camps, etc.) have been helpful. The dropout rate has decreased from 16% to 11% between 2016 and 2020. Among first-year students, the dropout rate has decreased from 19% to 16%. Over the five years, the average time to graduation has become shorter in both bachelor's studies, professional higher education and master's studies.

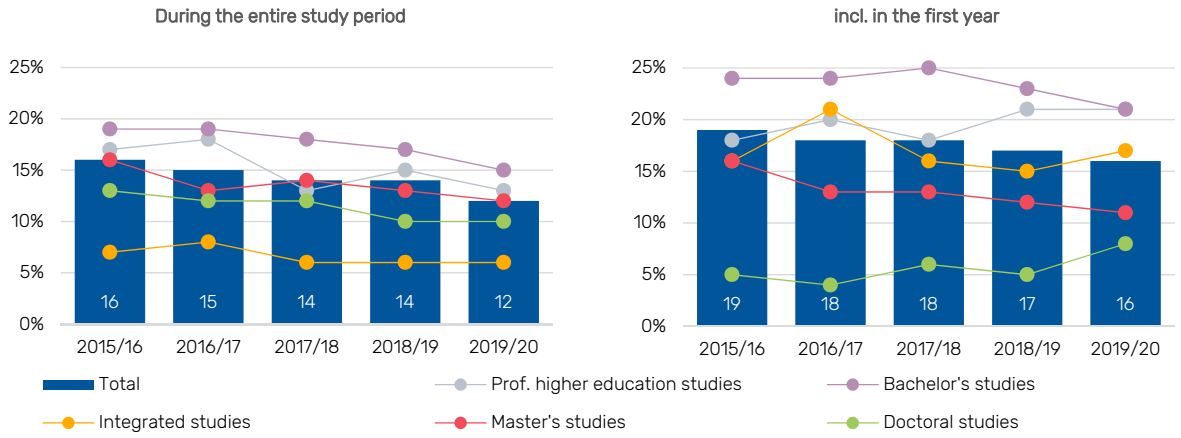

Figure 23. Percentage of students interrupting their studies (during the entire study period and in the first year) 2015/2016–2019/2020

Table 17. Average years to graduation on various levels of study 2015/2016–2019/2020

Level of study	Standard duration in years	Year of graduation				
		2015/16	2016/17	2017/18	2018/19	2019/20
Professional higher education studies	3–4	3.8	3.7	3.5	3.6	3.4
Bachelor's studies	3	3.5	3.4	3.1	3.2	3.1
Integrated studies	5–6	5.8	5.9	5.6	5.8	5.7
Master's studies	1–2	2.5	2.4	2.3	2.3	2.2
Doctoral studies	4	5.6	5.7	5.8	5.6	5.8

10.2. Counselling of students

The Counselling Centre operating under the Office of Academic Affairs offers study-related, career and psychological counselling to students and supports students with special needs both in Estonian and English. The counsellors also offer students training courses on study motivation, public speaking, stress, time management, job search and applying for a job, preparing for studies abroad and other topics. Since spring 2020, when face-to-face studies were cancelled due to the spread of coronavirus, the Counselling Centre has also organised counselling and training courses online. The curriculum feedback survey shows that about 20% of students have sought information or asked for help from the Counselling Centre, and 98% of them have received information or help.

Table 18. Number of individual counselling sessions at the Counselling Centre 2018–2020

Year	Career counselling	Psychological counselling	Study-related counselling	Counselling for students with special needs
2018	171	799	1,666	
2019	313	937	2,611	
2020	422	1,402	1,462*	130

** Since 2020, the statistics on individual counselling no longer include the inquiries by students applying for need-based special allowance.*

Videos introducing the Counselling Centre, about the location of the centre and experience stories of psychological counselling, career counselling and study-related counselling have been made to help raise awareness of the services of the Counselling Centre. There are bilingual posters of the Counselling Centre with the QR code at academic buildings; information about their services is shared on digital information displays. The booking system introduced in 2020 made booking an appointment with the career counsellor, psychologist or special needs adviser faster and more user-friendly.

Two study advisers of the Counselling Centre offer information and support in issues related to the organisation of studies and other study-related matters to both students and academic affairs specialists of academic units. On the UT web page, students can get the information they need and give feedback on and make suggestions about improving the organisation of studies. In 2020, a smart information button was created in SIS for students to quickly find topics related to studies and support services.

Two career counsellors of the Counselling Centre support students in career planning and applicants in choosing their specialisation. The number of people seeking career counselling has increased over the years. In cooperation with international partners of the project SkillMill, career counsellors are developing a digital solution for recognising and verbalising soft skills obtained during studies abroad and using them in the job search.

Mental health issues have become increasingly topical, and the need for psychological counselling has grown. In 2020, to improve the availability of psychological counselling, the UT increased the number of psychologists, also by creating the psychologist's position at regional colleges. This has increased the number of students who have sought psychological counselling (see table 18). In spring 2021, the analysis of students' mental health initiated by the UT was completed, based on which activities funded from the development fund are planned to support students' mental health.

During the exam sessions, the Night Library offers lectures, consultations by the counsellors of the Counselling Centre and dog therapy in cooperation with the Estonian Association of Assistance and Therapy Dogs to relieve students' stress.

10.3. Supporting students with special needs

Regular training is provided to university staff to better understand and support students with special needs. In 2020, 119 employees (67% of them academic staff) participated in a seminar series "How to support the learning of students with special needs?"

Students with special needs can ask for adaptations in the organisation of studies, which means changes to the organisation of the course or the learning environment. The Study Regulations that entered into force in 2021 specified the procedure for making these adaptations. To request adaptations, the student must contact the special needs adviser. The adviser maps the student's difficulties, compiles the list of recommended adaptations and, with the student's consent, sends this information to the teaching staff responsible for the courses and to the programme director of the curriculum.

The library provides services for readers with special needs and has created special workstations for the visually impaired. In 2009, an overview of the accessibility of UT's academic buildings for wheelchair users was compiled, and accessibility deficiencies were eliminated. Based on feedback from students with special needs, the academic buildings and the library were equipped with wheelchairs, rollers and crutches. The information on the accessibility of the UT's academic buildings was included on the Estonian website on accessibility, but as the website was discontinued, in 2021, the UT started to map its buildings again to create an accessibility information system.

In 2020, the UT was the first Estonian HEI to allow students with reduced work ability to apply for an exemption from the tuition fee starting from the autumn semester of 2021/2022. Until then, this option was only for those students with special needs who have been established to have a disability. The new system creates a better opportunity for students with reduced work ability to distribute their study load and study at a pace that suits their state of health.

10.4. Support system for international students

When international degree and visiting students ('international students') arrive in Estonia and start their studies, they get advice on issues related to living and studies from the staff of the Study Abroad Centre and tutors. International students are happy to share their experiences and support other international students in the Buddy Programme. An orientation course on living arrangements and the organisation of studies takes place at the beginning of each semester. The library introduces its services in English, German, Russian and Finnish. Considering the vast amount of information starting international students receive, checklists have been prepared to help them keep track of all the procedures and opportunities that need their attention in the first weeks. The UT advises international students on applying for and extending the visa and the residence permit for study to give students a clear understanding of the requirements and their relationship with the progress of their studies.

At the beginning of the academic year, all institutes that offer foreign-language curricula organise an information seminar on the organisation of studies. During their studies, international students are supported by the academic affairs specialists and programme directors of their curriculum and supervisors. Tartu Welcome Centre created in 2019 is a good partner for the UT in solving issues related to international students' living arrangements (see also standard 12). UTSU supports the participation of international students in decision-making bodies by offering interpreting service.

To get feedback, the UT has participated in the world's largest International Student Barometer by i-graduate. According to the results of both 2017 and 2019 editions, international students rated the UT's support services and learning environment to be very good. In 2017, the support in applying for a visa or residence permit (1st place among European

universities, 3rd place overall) and the counselling services provided by the UT (4th place overall) were particularly highly rated. In 2019, international students' rating of the UT's studying, support and living conditions gave us the 2nd to 6th place among European HEIs (10–60th among all HEIs). In the learning section of the survey, UT's international (visiting) students gave their highest score (more than 95% satisfied) to the competence of teaching staff, the clarity of assessment criteria and opportunities to participate in teaching. The feedback and supervision provided to students were ranked higher than the European average. The learning environment, including e-learning opportunities, and the multicultural student scene were also highly appreciated. In terms of support services, international students were most satisfied with the pertinent and helpful information they received to help them prepare for their studies at the UT. Student satisfaction was highest with IT services (98% satisfied) and the support services offered by the Study Abroad Centre and library, but their concerns are related to the lack of job and traineeship opportunities.

10.5. Study materials and the Study Information System

The UT's official environment for exchanging information related to the organisation of study is the Study Information System (SIS) introduced in 2001. The SIS exchanges data with the Estonian Education Information System, and also the Moodle environment is interfaced with the SIS (for more information, see standard 8). The Estonian University of Life Sciences (EMU) also uses the UT's SIS.

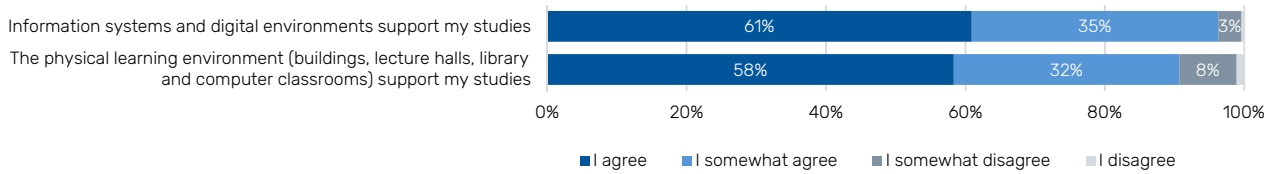

Figure 24. Students' feedback on the information systems and the learning environment based on the 2021 curriculum feedback questionnaire (n = 2,930)

Students' feedback shows that the UT's information systems and digital environments support their studies (incl. during the complicated time of the corona pandemic 2020–2021). Until the spring semester of 2018/2019, students also gave feedback on the content, formatting and relevance of study materials. When the new course feedback questionnaire was prepared, it was found that the question about study materials does not give any new information about the quality of the course. In the new questionnaire, the students give feedback on whether they understood the subject matter.

At the UT Library, students can use scientific literature and numerous databases, rooms for group and private work, and borrow web cameras. To improve the availability of study materials, the collection of e-textbooks is developed and the necessary printed materials are digitised.

To make sure the SIS supports studies as much as possible, meets the expectations of staff and allows for its flexible development, the UT is developing a new version of the SIS. Transition to SIS2 takes place by development phases. Students were the first to start using SIS2 in the spring semester of 2018/2019. Students have also been involved in the development of SIS2, for instance, by identifying the course information fields that are most important for learners or the most suitable time for opening course registrations as their practical training project. Also, a map application has been integrated into SIS2, developed by students to help their peers find their way between UT buildings.

SIS2 is an information system with a service-oriented design and architecture and role-based dashboards, the development of which takes the UT closer to becoming a paperless university – between 2022 and 2023, all study-related applications, proposals, directives and invoices will become digital. In the ENLIGHT network, the UT and the University of Göttingen are leading the development of a solution that allows the students of the network to use the study information system of their university to see and register for courses offered by other ENLIGHT universities.

Strengths

- The UT's activities to support students, especially at the beginning of their studies and before graduation, have helped reduce dropout rates and shorten the duration of studies.
- When providing support services to students, the needs of different target groups are considered. Students themselves are actively involved in providing support for both first-year students and international (visiting) students.
- The services of the Counselling Centre are well integrated. The services are provided in public or private rooms in the UT Library and online. An appointment with the counsellor can be made in a booking system, which is accessible also for visually impaired students.

Development activities

- Based on students' mental health analysis, activities funded by the development fund are planned to support students' mental health.
- To gather comprehensive information on the accessibility of the UT's academic buildings, the situation of all academic buildings will be mapped in 2022, and accessibility information will be displayed via the SIS to both learners and staff members.
- A pilot solution will be completed in international cooperation by the autumn of 2023, enabling students to register for courses of the ENLIGHT universities via the SIS.

11. RESEARCH, DEVELOPMENT AND/OR OTHER CREATIVE ACTIVITY (RDC)

Standard. The HEI has defined its RDC objectives and focus based on its mission, as well as on the expectations and future needs of society, and assesses their implementation and the societal impact of its RDC activities. RDC supports the process of teaching and learning at the HEI. Support services for RDC are purposeful and foster the implementation of the objectives of the core process.

The UT plans its research and development activities pursuant to its strategic plan and the national research and development and innovation strategy. The respective A2020 objectives included research and development that has a global impact and guides the development of Estonia, and innovation and entrepreneurship, through which knowledge reaches the economy. In the period of A2025, the UT will focus, in cooperation with different fields of research of the UT, on working out evidence-based recommendations for the development of public policies, to trigger the changes referred to by the Government Office in the course of preparing the Strategy "Estonia 2035".

11.1. Research and development performance

In the 2017 regular evaluation of R&D activities, all the UT's evaluated fields of research were positively evaluated (natural sciences; engineering and technology; medical and health sciences; agricultural and veterinary sciences; social sciences and humanities and the arts). In the course of targeted evaluation a year earlier, the professorships in research areas of national significance, created for realising the UT's mission, were positively evaluated. In addition, the UT participated in the ACEEU accreditation process of entrepreneurial universities in 2019 and received the ACEEU accreditation for entrepreneurship (see also standard 3).

The key performance indicators (KPIs) and other metrics for performance monitoring are on the statistics dashboard. In recent years, there have been improvements in R&D quality and performance, including in the overall ranking of influential fields of research and the number of researchers at the top of their field. For example, according to Essential Science Indicators (ESI)[5], the UT was in 2011 among the most cited research institutions in only six fields of research, in 2016 in nine fields, and in 2021 in 13 fields out of 22. The number of highly cited researchers has doubled between 2016 and 2021: while in 2016, 34 UT researchers ranked in the top 1% of the highly cited researchers in their field, in March 2021 the respective number was 71.

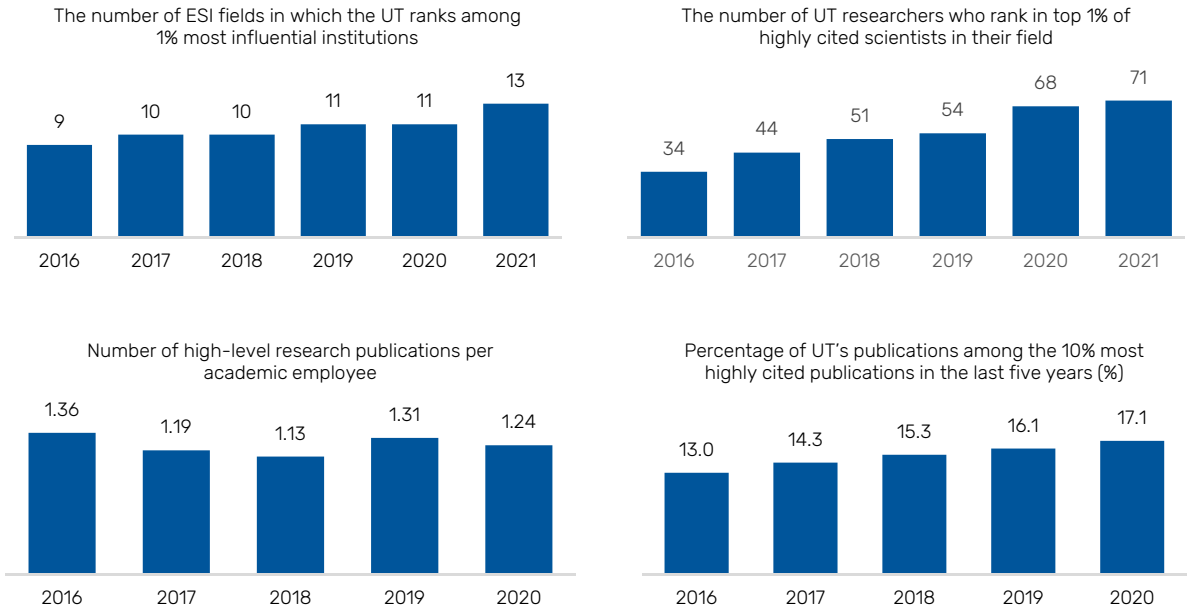

Figure 25. R&D impact indicators 2016–2021

The overall number of research publications and the number of publications per academic staff member has remained relatively stable, while the number of high-level publications has increased, which is also in line with the UT's aim to promote quality over quantity. This is confirmed by the fact that the share of the 10% most highly cited publications over the last five years (one of the A2020 KPIs) has steadily increased at the UT, reaching 17.1% in 2020 (from 13%).

Following the A2020 and the language and internationalisation principles, the UT has supported the writing and publishing of university textbooks. Researchers have also applied for publishing grants from the national funding

[5] *ESI is an analysis tool that identifies the most cited scientific publications in the Web of Science Core Collection. The ESI analysis covers more than 11,000 journals published worldwide, ranking the authors, institutions, countries and journals of 22 fields by publication and citation indicators. Due to the methodology of the database, the humanities are, unfortunately, not included in the analysis.*

programme. Participation in both teaching and research is assessed during the evaluation process starting from the positions of research fellows and lecturers, so all teaching is based on the latest knowledge.

A2025 also states that strong science is the basis for teaching and studies. Students are involved in research as early as possible, for example, the Youth Academy organises the programme "Talents to Tartu" and mediates the growth program of SEB Bank at the UT. Teams formed of students of various specialisations can offer solutions to enterprises' problems via the Futulab internship programme. In the course of this programme, for example, the power consumption calculator was developed for Eesti Energia and a knowledge management tool for the Estonian Police and Border Guard Board. Another success was the student satellite ESTCube-1 programme, followed by ESTCube-2.

11.2. Research and development funding

The UT's research income nearly doubled over the period 2016–2020. While in 2016, the funds received in the research budget amounted to 54.5 million euros (40.1% of the UT's main budget), in 2020, the figure was 100.8 million euros (50.1% of the UT's main budget). A significant factor was the increase in public research funding to 1% of the GDP, achieved through the UT's active communication with the government. Besides public funding, also international research funding has grown considerably, driven by the strengthened support services and more active application for international funding.

The UT's public baseline funding more than tripled between 2016 and 2020 (from €6.1 million to €18.9 million, see figure 6). The UT's share in the baseline funding of all Estonian R&D institutions has remained stable at 44–45%. Personal and institutional research grants received from the Estonian Research Council (ETAg) increased from €23 million in 2016 to €26.1 million in 2020. For example, in the 2020 ETAg call for grant proposals, UT researchers received 59% of all research grants intended for Estonian R&D institutions. There has been a significant increase in the volume of national service contracts and grants – this is the result of active cooperation with the public sector (public procurement and national R&D programmes), closer cooperation with Estonian companies, and large-scale Covid-19 studies carried out in 2020.

The structural funds are another important source of research funding, with funding agreements for 6–37 million euros signed each year from 2016 to 2020. In 2021, funding from the structural funds accounts for 16% of the UT's research budget. Dependence on the structural funds has decreased over time.

- The largest grants have come from the ASTRA institutional development programme, including €15 million for the construction of the Delta Centre and €23.4 million for ASTRA development activities, with a focus on teaching and research infrastructure, the involvement of international academic staff, doctoral schools, technology transfer, etc.
- In 2016–2023, there are nine centres of excellence in Estonia and the UT participates in all of them. The UT's budget is 22.3 million euros, which is 54% of the funding of centres of excellence. The UT participates in six centres of excellence as a partner and leads three centres of excellence.
- The UT is the lead institution of most objects of the Estonian Research Infrastructure Roadmap approved in 2019. The 18 infrastructure objects in which the UT is involved have received support in the amount of a total of €14.2 million, which is more than half of all the infrastructure support granted by the state.
- In addition, the UT has actively participated in other funding programmes (Mobilitas+, RITA, IT support measure, ResTA, etc.).
- Funding for basic research and research infrastructure will decrease significantly in the next structural funds period, 2021–2027. Thus, once the structural funds run out, alternative sources need to be found from the state budget to ensure the sustainability of basic research and research infrastructures, and the UT will have to increase its contribution to infrastructure modernisation from its main budget.

Over the period 2016–2020, the UT's international funding for research grew exponentially.

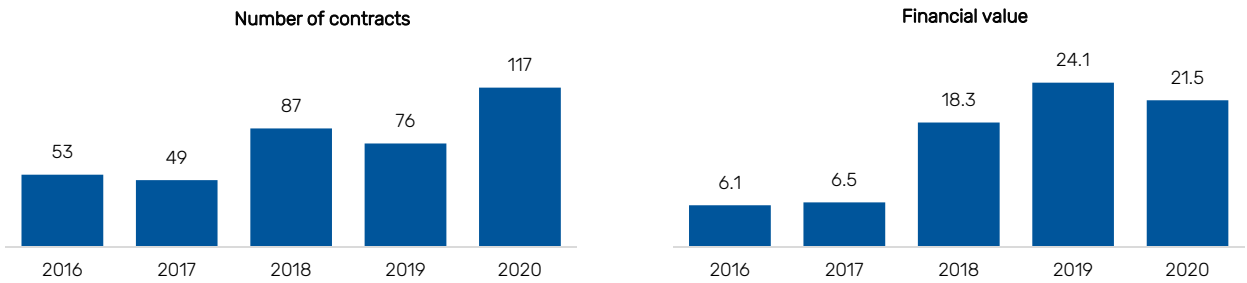

Figure 26. International R&D funding as number of contracts and value in million euros 2016–2020

The largest increase in international funding comes from the EU's Horizon 2020 framework programme, from which, as of 16 November 2021, the UT has received funding for 173 projects worth almost 69 million euros. This gives the UT the second ranking among the universities of Central and Eastern Europe (EU13). The most successful instrument of Horizon is the ERA Chairs, from which the UT has received a total of 17.3 million euros for seven chairs, which is the best result in

Europe for one institution. During Horizon 2020, the European Research Council (ERC) gave UT researchers five grants in the total amount of 6.9 million euros. To support researchers and free up their time to apply for cutting-edge grants, the UT has introduced the ERC Incentive Grants.

The UT has taken an active role in the Horizon Europe partnerships, selected priority partnership projects (e.g. European Institute of Innovation and Technology (EIT) communities) and supported researchers in applying for project grants. To participate in the partnership, the UT invests 190,000 euros per year, which has led to a nearly fivefold amount from the increase in international financing. The raising of international funding is primarily linked with the UT's active participation in Brussels-based cooperation with European university networks (The Guild, ENLIGHT, etc.; see standard 5).

Since the establishment of the Grant Office in 2017, the UT has focused on securing international research grants, which has helped to considerably increase international funding. From 2021, the Grant Office's Project Writing unit has also concentrated on obtaining teaching grants (e.g. Erasmus development projects), and the goal for the next three years is to significantly increase the volume of grants for teaching and learning. While the average share of international funding in the years 2018–2020 was more than 17% in the research budget, it was only 1.4% in the teaching budget.

11.3. Cooperation with the public and business sector

UT researchers have flexibly responded to society's needs and participated in state procurements and national research programmes. The UT also responded quickly to the coronavirus crisis in March 2020 by submitting a comprehensive value proposition to the Estonian government to quickly launch monitoring and other studies and give scientific advice at the outbreak of the crisis. As a result, the strategic collaboration between researchers and policymakers has reached a new level and the national leaders' trust in science has increased. UT researchers initiated the Scientific Advisory Board and have given advice to the government throughout the crisis. UT researchers have also launched dozens of research studies and unique monitoring projects (incl. Covid-19 prevalence study and waste water monitoring) to provide science-based advice and evidence-based information to the government for managing the corona crisis. Since the beginning of the crisis in March 2020, the UT has initiated research studies worth a total of €15 million.

Business cooperation was and is one of the UT's strategic objectives according to both A2020 and A2025. This is backed by public innovation measures, the most important of them being NUTIKAS, the programme supporting the involvement of researchers and the large-scale developments of enterprises, in the framework of which the UT has implemented 36 collaboration projects in the total volume of €14.4 million. The R&D service contracts also include an increased financial income from contracts with the UT's spin-offs, amounting to nearly 10% of the total value of contracts in 2020. The

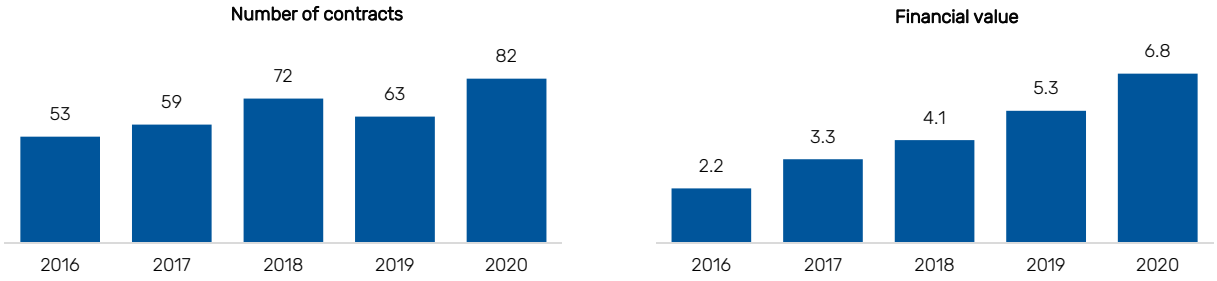

Figure 27. Number and financial value of contracts with businesses in million euros 2016–2020

financial value of R&D services provided to businesses tripled between 2016 and 2020.

The upcoming restructuring of public innovation grants and their lower financial volume may result in a decline in the UT's income from contracts. The new measures proposed by public authorities are not directed to university-industry cooperation but support companies' internal innovation and the recruitment of researchers. One of the weaknesses of the cooperation so far has been the small volume of the grants, which encourage companies to favour quick solutions and do not provide continuity to researchers or give them an opportunity to put their professional skills to a test. By means of the career model of academic staff (see standard 2), the UT seeks to raise the value of collaboration with enterprises by providing support services to researchers to encourage them to set up companies and business collaboration. For large-scale development, the UT applies for Horizon Europe and EIT grants together with enterprises (e.g. Mainor Ülemiste, Cybexer and Skeleton Technologies). This means that the UT will shift its focus from service contracts to joint research with enterprises.

By the end of 2020, the UT had 69 patent applications and patents to protect 27 inventions. In addition, the intellectual property portfolio includes two software solutions. The UT received around 90,000 euros of licensing income, while the protected solutions generated 240,000 euros in additional service contracts and 1.7 million euros in research grants. The most successful object of intellectual property is the Lactobacillus fermentum ME-3, which in 2020 was added to cheese, ice cream and chocolate.

The UT is the first university in Estonia to establish a separate company, UniTartu Ventures OÜ, to commercialise research, support the development of spin-offs and accelerate their growth. UniTartu Ventures creates new ways to promote UT's science-based spin-offs and startups, and through the company, the intellectual property created by UT researchers will be invested into research- and technology-intensive enterprises.

Led by the Natural History Museum and Botanical Garden, the UT also engages in citizen science (see also standard 12). The Natural History Museum and Botanical Garden also represent Estonia in the European Citizen Science Association (ECSA). The most important directions in international cooperation have been the improvement of the methodology of nature observations, the involvement of enthusiasts in the digitisation of natural history collections and making private collections' data available to the public. For example, Looking for Cowslips grew from a local citizen science campaign into a pan-European one by spring 2021.

11.4. Administration and support services

The vice rector for research manages the UT's activities in the field of basic and applied research, and the vice rector for development is in charge of the area of knowledge transfer and research-based development. For better organisation of support services, new units were established in 2017 in place of the former Office of Research and Development – the Grant Office and the Centre for Entrepreneurship and Innovation. The library within the sphere of responsibility of the vice rector for research coordinates the open science support services. The UT bylaws governing the development projects of the field of teaching and research include the Regulations for processing development projects and the Procedure for managing intellectual property created at the University of Tartu.

The main task of the Grant Office is to provide support services that improve R&D efficiency and to participate in R&D policymaking in Estonia and internationally. A grant matching software[6] has been developed to encourage researchers, recommending specific funding opportunities to researchers based on indicators characterising their activities. The system includes a possibility to compare the researchers' indicators to those of the successful applicants for ERC grants. To enhance the success of grant applications, the Grant Office has developed a project writing and consulting service, which has helped researchers bring 14.2 million euros worth of grants to the UT within 2.5 years. Support services for the project application and contract coordination stages of different funding instruments have been strengthened. The workload of the Grant Office is illustrated by the fact that in 2020 a total of 682 R&D and teaching project contracts worth 87.9 million euros were signed via the office. The process is supported by the digital project processing environment (the grant web), which is integrated with other information systems (finance web, ETIS, etc.).

The main task of the Centre for Entrepreneurship and Innovation (EIK) is to support researchers in providing research-intensive services or starting their business. EIK also helps commercialise the intellectual property of the UT and its members. The UT supports increasing the transferability of research findings through the development fund. In the past three years, the fund has given support to 31 researchers or research teams, resulting in nearly 20 new research-intensive businesses being created, and more than 20 business cooperation agreements signed or under negotiation. The main programmes and networks coordinated by EIK:

- The UT spin-off programme supports researchers who have created an application and want to bring it to the market as entrepreneurs. In 2020, 15 new teams started in the programme, and nine more were added in spring 2021. At the end of 2020, the UT had 58 spin-offs with more than 500 employees in total.
- The partnership programme aims to cooperate more closely with selected institutions in research and development, also involving students, and to support institutions in commissioning the training they need.
- Adapter – Estonian R&D institutions and universities' network and a portal for ordering their services, which seeks to support cooperation and reduce duplication.
- The intellectual property protection and commercialisation service, which helps researchers and the UT to bring applied research solutions to enterprises and society faster and more effectively. The service includes an analysis of the application, a patent search and preparing a protection strategy.

The library has been the leader of open access and open science both at the UT and in Estonia, organising information events and counselling national policymakers. Since 2009, the library has been the Estonian national contact point for open access, and the National Open Access Desk (NOAD) of the OpenAIRE e-infrastructure in Estonia. The OpenAIRE portal is interfaced with the UT digital archive DSpace and the data repository DataDOI. In 2014, the UT joined DataCite and founded the DataCite Estonia Consortium to ensure wider accessibility and use of the resources of the member institutions' research communities.

[6] *This is a exclusive servise for University of Tartu staff and further information (and the software itself) is available on the university's intranet.*

Strengths

- The UT's research and development activities are at a high international level, and the quality of research has continued to improve over the recent years.
- Through proactive communication with the government, the UT has increased strategic cooperation between researchers and policymakers (for example, in managing the Covid-19 crisis) and contributed to reaching the political agreement to increase public funding for research to 1% of GDP.
- Well-functioning support services have helped to significantly increase international funding. The UT successfully participates in calls for proposals under Horizon 2020, the EU framework programme for research and innovation, and acquires funding from European partnership programmes (incl. the EIT). Digital tools have been developed to boost the success rate of grant applications and to manage research projects.
- The volume of business contracts has increased and the UT has launched several new support actions for development and the commercialisation of research. The UT was the first among Estonian HEIs to establish a holding company, UniTartu Ventures OÜ, to invest the intellectual property created by UT researchers into research and technology-intensive companies.
- The UT Library is a modern learning and working environment which responds to the needs and expectations of different target groups and, through its research and cultural collections, carries and creates national cultural memory, while at the same time leading the national policies on open science and open access, research data management and providing opportunities for using research data.

Development activities

- An instrumentation fund will be set up in 2022 to ensure the sustainability of basic research and research infrastructure.
- One of the UT's goals for the next few years is to increase the number of ERC grants in order to utilise the full potential of UT researchers, obtain international funding for research excellence and get closer to high-ranking European universities (The Guild universities).
- Similarly to obtaining international research grants, the share of international funding will also be increased in teaching.
- In larger-scale development work, the UT will focus on joint research grants with companies rather than R&D service contracts.
- The UT expands collaboration with the public sector to consistently involve researchers in decision-making processes and policymaking.

12. SERVICE TO SOCIETY

Standard. The HEI initiates and implements development activities, which enhance prosperity in the community and disseminate recent know-how in the areas of the HEI's competence. The HEI, as a learning-oriented organisation, promotes lifelong learning in society and creates high-quality opportunities for that.

The UT's mission as Estonia's national university is to bear responsibility for tackling challenges faced by society. The importance of service to society has been stipulated in the University of Tartu Act, the UT statutes (§ 1 and 2), as well as the strategic plan (see clauses 6.4, 6.5 and 7 of A2020 and topics 4, 7, 8 and 10 of A2025). Similarly, the statutes of all structural units within and outside faculties mention the provision of services needed by society as one of their main tasks.

Table 19. Overview of activities the UT offers to society apart from higher education and R&D

Activity	Responsible
Participation in the activities of various bodies and working groups for policy-making, drafting laws, strategic plans, etc.	Rector's Office, institutes, colleges, institutions
Popularising research and scientific thinking	Institutes, colleges, Youth Academy, library, museum, natural history museum and botanical garden
Continuing education courses, incl. massive open online courses (MOOCs), public lectures, discussion and cultural events	Institutes, colleges, institutions, support units
Developing and organising e-courses on information literacy for various target groups	Library
Digitising collections and making them accessible in DSpace	Library
Promoting open access and organising the annual Open Access Week	Library
Making the collections accessible for readers who are not UT students or staff	Library
Exhibitions, educational programmes and cultural events	Library, museum, natural history museum and botanical garden
Publishing books, book series, scientific journals and educational resources for HEIs and making some of the published books available on open-access platforms OAPEN and DOAB	Press
Providing recreational sports opportunities and organising sports events	MTÜ Tartu Ülikooli Akadeemiline Spordiklubi
Coordinating the activities of 12 hobby and cultural societies of the UT and EMU (incl. organising events)	MTÜ Tartu Üliõpilasküla

12.1. Developing community well-being

All of the UT's academic units and institutions develop community well-being. Surveys are carried out to understand the needs and expectations of customers.

The UT Library is the oldest in Estonia (founded in 1802) and is Estonia's leading research library with the largest collection (more than four million documents). One of its missions is to increase community well-being. The library provides all users with access to Estonian and world cultural heritage and information sources to support the development of smart and knowledge-based society. By the end of 2020, the library had 30,078 registered users, 32% of them from outside the UT. As the co-organiser of the international literary festival Prima Vista started in 2004, the library promotes reading habits and respect for books. The library is a valued provider of digital competence training both within and outside the UT and has started organising free language cafes and reading groups for the public.

The city of Tartu values the UT Museum as well as the Natural History Museum and Botanical Garden as providers of non-formal education and procures active learning programmes for schools in different fields. In 2016–2020, the UT Museum organised about 550 and the Natural History Museum and Botanical Garden 2,283 programmes for a total of 42,506 participants. 103 educational programmes have received the quality label of the Estonian Environmental Education Association and one Moodle course has received the e-course quality mark.

The Youth Academy offers students of basic and upper secondary schools the opportunity to improve their knowledge in a wide range of subjects, prepare for Olympiads and competitions, get support for higher education studies and broaden their horizons. Participating in courses also helps them develop their skills to work independently. In 2016–2020, the number of courses remained around 45–50 and the number of learners grew steadily (a nearly 40% increase). The opening of new courses has extended the scope of target groups and subject areas (topics of humanities and social sciences were added to the courses of science and technology).

The museums and the Youth Academy actively promote research among young people. Among its other projects, the Youth Academy has created the programme "Uurimislabor" (Research Lab), made educational videos on sciences and organises research camps. In 2019 and 2020, the Youth Academy supported MTÜ Robootika in organising the youth STEM programme FIRST® LEGO® League and the robotics competition RoboMiku Lahing. The UT museum has created its own character Hull Teadlane (Crazy Scientist) to popularise research. In 2020, the Crazy Scientist's research conference

received the science communication award of the Estonian Research Council. Since 2015, the Natural History Museum and Botanical Garden organise the Nature Festival that integrates nature and culture. In 2018, the festival's 24-hour marathon of nature observations received the science communication award of the Estonian Research Council in the category of new initiatives. Students are also involved in research popularisation: for instance, Psühhobuss was started by the Estonian Psychology Students' Association.

Exhibitions organised by UT institutions are modern and meaningful and have received attention in Estonia and abroad: the museum's exhibitions "The University of Our Lives" and "Estonia of Ideals" (2020) received the annual award of the Cultural Endowment of Estonia and the project "A Hundred Faces of the University of Tartu" (2020) the annual award of the International Committee for University Museums and Collections (UMAC).

MTÜ Tartu Ülikooli Akadeemiline Spordiklubi promotes lifelong physical activity and healthy lifestyles and offers sports opportunities for both UT members and the residents of Tartu. The sports club has close cooperation with the UT Institute of Sport Sciences and Physiotherapy, which supports a research-based approach to the organisation of sports activities. Top athletes can be admitted to the UT under special conditions and benefit from flexible studies. In 2021, the UT was the only HEI to receive the honorary title "Spordisõber 2021" (Friend of Sports) from the Ministry of Culture and the Estonian Olympic Committee for supporting the studies of athletes.

MTÜ Tartu Üliõpilasmaja coordinates the creative activities of cultural and hobby societies of the UT and EMU and organises events. In 2016–2020, there were 12 cultural and hobby groups operating at Üliõpilasmaja, all of them also known outside Tartu and Estonia. Üliõpilasmaja has been involved in the preparation and organisation of various large events, i.e. the 18th student song and dance festival "Gaudeamus 2018" and the 150th anniversary of Estonian song celebrations in Tartu and Tallinn.

With its historical buildings, the UT helps to maintain a diverse and inspiring urban environment. In 2019, the UT organised the celebrations of the 100th anniversary of Estonia's national university, in which everyone could participate.

Structural units have created various opportunities for fostering students' social and public activities. For instance, the School of Economics and Business Administration organises the Leader Programme, which gives credit points; students of the Faculty of Law provide free legal advice and students of psychology offer free online counselling.

In A2025, the UT defines itself as the university of all Estonia. At the regional level, the university's colleges in Narva, Pärnu and Viljandi contribute to the service to society.

- Viljandi Culture Academy coordinates the activities of Viljandi as the UNESCO Creative City of Crafts and Folk Art. In 2020, a cooperation agreement was signed with the city of Viljandi for the development of creative entrepreneurship.
- In 2019, the city of Pärnu and the UT signed a five-year cooperation agreement, aiming to make Pärnu College a prominent centre of higher education and competence in western Estonia. In 2021, the Association of Local Authorities of Pärnu County became the third party of this cooperation. Such a cooperation agreement, which confirms the importance of the university in regional development and promotes the development of the region by linking the knowledge of the university and the development needs of entrepreneurs, is unique in Estonia. Academia Pernaviensis, founded in 2019 with the co-support of Pärnu College, aims to promote an academic communication environment in Pärnu.
- Narva College has been the only bastion of Estonian language and culture in Narva for many years. It organises Estonian language and literature clubs and the largest teachers' conference in Estonia. The college is also one of the leaders of Ida-Viru Education Cluster and, on the initiative of the college, the Ida-Viru research council was established to support the Union of Ida-Virumaa County Municipalities.

The colleges regularly organise public concerts, conferences and lecture series, as well as various club activities (such as the jazz club in Narva).

In 2019, Tartu City Government, the UT and EMU founded the Tartu Welcome Centre (MTÜ Tartu Välismaalaste Teenuskeskus), aiming to ensure a smoother adaptation of new immigrants into Estonian society to increase regional competitiveness in southern Estonia. To this end, the services supporting adaptation (applying for a personal identification code, registering a place of residence, personalisation of the bus card) and all the necessary information have been brought together in one place. In addition, the centre hosts various training courses, including the Estonian language and adaptation courses of the Settle in Estonia programme.

12.2. Impact of the university's staff in society

The participation of academic employees in the work of professional associations and in informing the public is assessed both in the recruitment and the evaluation process. According to the job descriptions of academic staff effective as of 2018, service to society is one of the four areas assessed in evaluation in addition to teaching, R&D and management (see also standard 6). The higher the position, the more important is contribution to society. At the same time, the UT

does not have a central overview of the social impact of its staff, as the members of expert panels are not appointed but invited, and the employee does not need to inform the employer.

Service to society is also highlighted on the websites of several academic units, e.g. the School of Economics and Business Administration presents the media appearances of their researchers in a separate section.

UT staff members are involved in the development of national strategies. For instance, UT professors led the drafting of the education strategy's vision document "Smart and Active Estonia 2035".

UT researchers are also involved as experts in several committees and councils (Estonian National Museum, Ahhaa science centre, etc.). On 20 March 2020, at the beginning of the emergency situation due to Covid-19, the Government of the Republic formed the Scientific Advisory Board, all members of which were affiliated to the UT, representing various disciplines (mathematical statistics, psychology, medicine). Members of the board are leading spokespersons on the topic of Covid-19. For instance, the indicators of the national risk levels have been agreed upon based on the recommendations of the board.

In spring 2021, UT researchers and experts answered questions on the topic of coronavirus on Facebook. During the pandemic, students volunteered in various services: in hospitals and hotlines, as assistant teachers and mental health advisers, etc. On the UT website, it is possible to watch the subtitled recordings of presentations of the conference "Intelligent adaptation to the coronavirus" that took place on 26–27 November 2020.

On UTTV, video lectures, incl. those by professors of liberal arts, are accessible for all.

UT employees belong to the boards of local governments, enterprises and cultural institutions.

12.3. Alumni activities

The UT's alumni activities are organised by academic units and centrally by the Marketing and Communication Office. These activities are based on the alumni surveys, the HEI reputation surveys and other target group surveys (e.g. focus group surveys among students as future alumni). The aim of central alumni activities is to keep alumni informed about developments at the UT, to provide them with the opportunity to support the university (e.g. scholarships, traineeship or job offers, mentoring), and to involve them in teaching and activities supporting the UT's core activities (e.g. student career planning, science popularisation, the promotion of teaching activities). The largest ever UT alumni get-together took place in 2019.

In 2021, an overview of alumni activities was compiled. It revealed that although the responsibilities of curriculum-based alumni activities have generally been assigned to someone (programme director, academic affairs specialist, etc.), this does not apply to all curricula. The purpose of alumni activities organised by academic units is to give alumni the opportunity to meet their fellow students and other UT members at seminars, conferences, reunions and other events, forward information about what is happening at the institute or college, involve alumni in teaching and research (e.g. programme councils), invite them to have a say in the development of the college or institute and offer opportunities for studies or continuing education.

The main information channels for central alumni activities are newsletters, the alumni blog and the UT website. In addition, a mentoring programme is organised every year to bring together UT alumni and students in order to provide the opportunity for mutually beneficial cooperation and strengthen the UT community. More than 130 mentor-mentee pairs started in the 2021 programme.

12.4. Continuing education

The development of continuing education proceeds from the objectives set in the strategic plans of the UT and its faculties, the principles of continuing education and annual action plans. In A2020, the UT set the goal to grow into a university of lifelong learning, offering diverse learning opportunities to various target groups and contributing to the development of its staff. The goal to have at least 35,000 continuing learners per year was achieved already in 2016. According to the performance indicators of continuing education institutions submitted to the MoER, the UT is the largest training provider in Estonia. The "university of lifelong learning" is a separate development direction also in A2025.

At the UT, continuing education learners can take continuing education programmes or individual courses together with degree students. The activities of continuing education are coordinated by the Lifelong Learning Centre of the Office of Academic Affairs that is in the responsibility area of the vice rector for academic affairs. It is tasked with organising and developing continuing education as well as initiating and leading the related cooperation. Continuing education can be organised by all academic units within their areas of competence and by support units and institutions according to the tasks listed in the unit's description. According to the principles of programme-based organisation of teaching, all units organising continuing education have appointed continuing education programme directors or coordinators who form a university-wide network. When organising continuing education, the continuing education module of the SIS is used, so the learners' data includes both their degree studies and continuing education. We were the first university in Estonia to issue digital certificates proving the completion of continuing education courses. Continuing education is

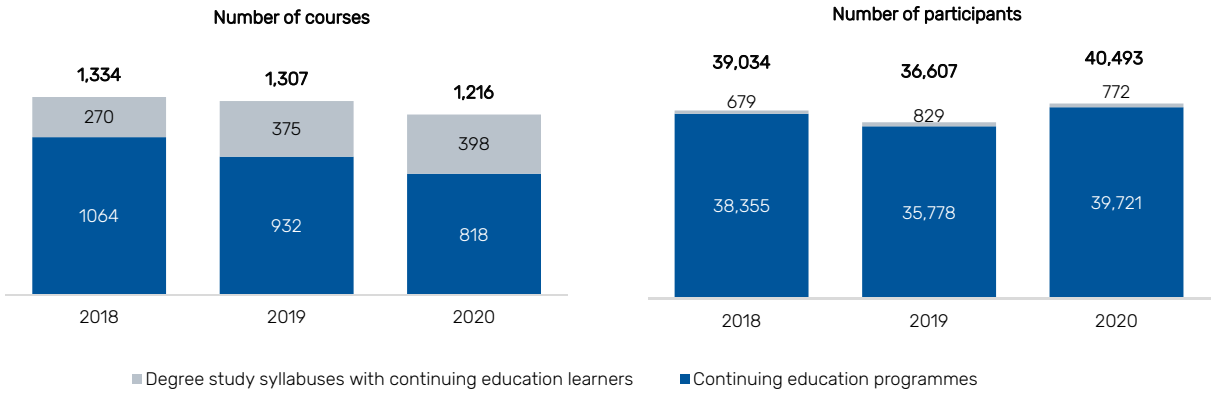

Figure 28. The number of continuing education courses and participants in these courses 2018–2020

mostly provided for a fee and fulfils the goal of the financial strategy to involve private funds. The turnover of continuing education has grown year by year.

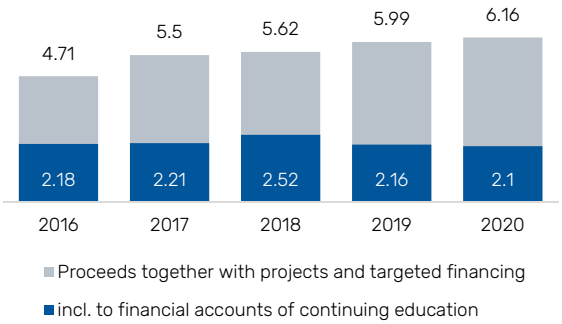

Figure 29. Turnover of continuing education in mEUR 2016–2020

In the development and offer of training courses, the UT considers the needs of the changing labour market and proceeds from the OSKA reports. Within the framework of state-commissioned continuing education, companies' staff are offered courses that support the introduction of new technologies in various sectors. Many companies, state agencies, health and educational institutions, ministries, etc. commission training from the UT every year. Learning opportunities are offered for different target groups: the Youth Academy is for pupils (see 12.1); the summer and winter university for alumni, specialists, managers, etc.; the University of the Third Age for older people; the international summer university (incl. in cooperation with foreign universities) for international audiences, in particular students. In cooperation with Tallinn Strategy Centre, a seminar series on economics ("Majandusakadeemia") is organised for entrepreneurs in Tallinn. Each year, nearly 40% of the training is provided to educators, with a large proportion of them free of charge for teachers thanks to funding from the European Social Fund programmes that the UT has successfully applied for. Every year, more than 1,000 trainers teach at continuing education courses organised by the UT, including a large number of practitioners in addition to teaching staff. The UT is a training partner of the Estonian Unemployment Insurance Fund.

To foster a lifelong learning attitude and ensure equal opportunities for learners, the UT is the first university in Estonia to offer free massive open online courses (MOOCs) in Estonian and English, mostly created from UT's own resources. In 2020, the MOOC "Basics of Psychology" attracted a record number of learners: 4,671. In 2016–2020, learners from 178 countries participated in the UT's MOOCs. A good example of cooperation is the four English-taught MOOCs on auditing, jointly developed by the UT and the National Audit Office of Estonia. Several MOOCs have received the title of the e-course of the year or the e-course quality mark in the category of HEIs. The number of UT's online continuing education courses and the share of learners in them has grown year by year. As a result, both the UT and continuing education learners were prepared to continue active learning in e-learning environments also during the coronavirus pandemic.

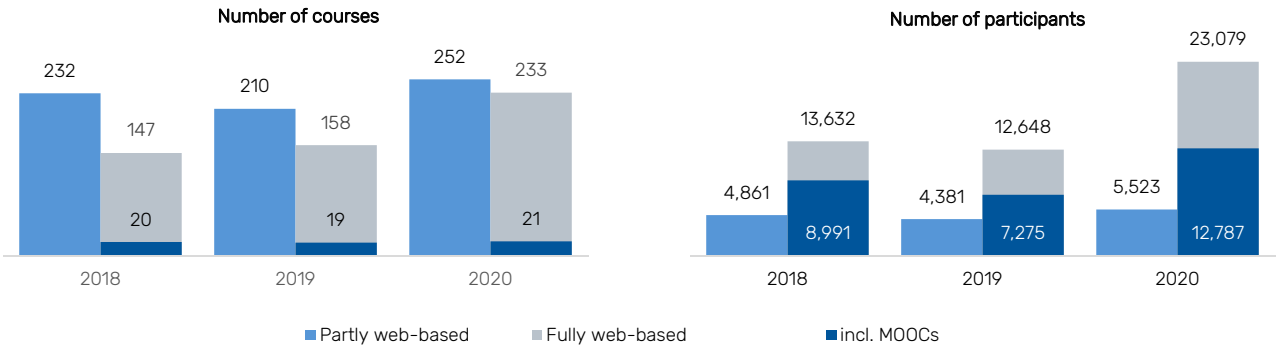

Figure 30. The number of online courses and participants in these courses 2018–2020

Starting from the 2021/2022 academic year, the UT offers micro-credential programmes based on the courses or modules of one or several degree curricula, allowing to acquire a minor or specific professional competence in a narrower field quickly, flexibly and taking the needs of the labour market into account. If the person has completed a micro-credential programme and wishes to continue studying and get higher education or a degree, the courses or modules are taken into account by RPL. About 700 people on average take individual degree courses every year.

To ensure the quality of the organisation of continuing education, guidelines and a wiki on continuing education has been compiled for programme directors. To assess learners' satisfaction, written feedback is collected after each training course; the feedback results are analysed and used for improving training activities. The organisers of continuing education have regular meetings on topical issues and are offered self-development opportunities in UT's internal training courses. Four times a year, the internal newsletter on UT continuing education is published. Since 2020, new trainers can participate in the continuing education trainers' development programme. The internal self-assessment of the quality of the continuing education system takes place every three years and is based on the joint EFQM Excellence Model of Estonian public universities, developed in the project "High-quality and versatile continuing education in cooperation with universities" (HYPE). Based on the assessment results, the action plan for the following period is compiled. Once a year, outstanding contributors to continuing education can be submitted for recognition.

Since 2019, EKKA has carried out the threshold-based assessment of continuing education providers, for the first stage of which (at the beginning of 2020), the UT received a positive result (without any precepts or comments). The UT engages in active international cooperation in the field of continuing education, being an active member of the European University Continuing Education Network (EUCEN) and taking part in several cooperation projects.

Strengths

- The UT's academic staff have an substantial impact in Estonian society.
- The UT offers high-quality, research-based continuing education for different target groups and ages in all the fields it teaches, and is the leader in the Estonian training market with the largest number of learners.
- The UT has a well-functioning support structure for continuing education, incl. a network of programme directors and coordinators, and supporting instructional materials.
- The UT is a recognised promoter of research.
- The exhibitions, artistic activities, conferences and other public events organised by the UT institutions are modern and meaningful and have attracted national and international attention.

Development activities

- In cooperation with the city of Tartu, the UT prepares the 2024 European Capital of Culture events that integrate research and culture.
- To harmonise the quality of alumni activities in institutes and colleges, the related network will be strengthened, e.g. the sharing of best practices between institutes and colleges is planned for 2022.
- Pursuant to the strategic plan A2025, flexible learning opportunities are created for adult learners at the UT, as the changing nature of work and new ways of working require the continuous acquisition of new skills.

IV. SELF-EVALUATION OF CHOSEN STUDY PROGRAMMES

1. BIOLOGY AND BIODIVERSITY CONSERVATION

Curriculum information

Level of study:	Bachelor's studies
Faculty:	Faculty of Science and Technology (LT)
Curriculum manager:	Institute of Ecology and Earth Sciences (LTOM) Institute of Molecular and Cell Biology (LTMR)
Language of instruction:	Estonian
Type of study:	Regular study
Place of study:	Tartu
Curriculum volume (ECTS):	180 ECTS
Curriculum code:	144302
Curriculum approved:	30 October 2015
Additional information:	Annex 3

Table 20. Number of students who graduated, were studying and admitted to the bachelor's curriculum of Biology and Biodiversity Conservation 2017–2021

	2017	2018	2019	2020	2021
Graduates			15	25	23
Students	88	107	124	148	159
Admitted students*	51	47	48	63	49

** Matriculated students at the start of the academic year who were studying as at 10 November*

1.1. Trends in development of the curriculum

1.1.1. Ensuring the competitiveness of graduates

Students were admitted to the Biology and Biodiversity Conservation curriculum for the first time in 2016. The curriculum is designed to provide graduates with a broad-based academic science education in the field of bioscience and environmental sciences. After completing introductory courses in natural and life sciences in the first year, students specialise in either molecular and cell biology or in biodiversity conservation. Graduates can continue their studies in the "Molecular Biosciences", "Biomedicine" or "Biology and Eco-innovation" master's programmes. It is also possible to specialise as a teacher by applying for the "Upper Secondary School Science Teacher" curriculum. Nearly 58% of the graduates of 2021 have continued on to master's studies at the UT in the same field and a few (2.5%) in a different field of study. Approximately 38% have not continued their studies at the UT. After graduation, it is possible to start working in institutions and companies that require staff with basic knowledge and skills in the field of wildlife and life sciences (e.g. molecular and microbiology laboratories, biotechnology companies, the food industry or environmental protection, monitoring and planning institutions).

According to a study published in 2019 by the OSKA labour demand monitoring and forecasting system on water and waste management and the environment, the number of jobs in environmental management and protection in state and local government agencies is decreasing, but is growing in the private and third sectors. The European Green Deal (green transition) is likely to play an important role, creating a greater need for environmental education activities to be carried out in a way that is comprehensible to the public and for environmental advice to be provided. It is predicted that there will be a greater need in particular for corporate environmental specialists and technologists, and environmental consultants. The need for analysts in molecular biology laboratories has increased significantly in the last two years. In addition to the field of medicine, molecular methods are also being increasingly used in the food industry to determine the safety and origin of food.

The curriculum has been created and developed on the basis of the OSKA report, as well as the proposals of employers and students. According to the OSKA report, more attention needs to be paid in the curricula for life and environmental sciences to the teaching of environmental law, professional ICT, communication and educational skills (e.g. the preparation and organisation of nature education programmes). Skills in using specialist software systems and databases,

knowledge of applications based on geoinformation systems (ArcGIS, MapInfo, etc.) and data analysis skills (e.g. data mining, analysis of (remote) monitoring and large data, and process modelling) are of growing importance.

Similar to the OSKA report, employers also attach importance to big data analysis and modelling skills (including GIS software skills), and communication skills, including conflict resolution skills. Employers also emphasise the need to relate theory to practice: students could already be involved in solving a real problem during their studies. In the field of biodiversity conservation, employers recommend increasing the volume of topics about global change and nature conservation (including the impact of agriculture and forestry, and issues related to animal population management). Students have wanted to get a more thorough understanding of the impact of the economy and use of natural resources on the environment and wildlife, including addressing global and land use change in courses teaching organism groups. It is also important to maintain the current level of fieldwork.

1.1.2. Internationalisation and the promotion of Estonian society, language and culture

Employers find that employees with international experience are more active than average and have a broader outlook. In addition, foreign experience contributes to the improvement of foreign language skills. Rather few students have participated in learning mobility, but in the 2020/21 academic year, however, the proportion of those who studied abroad was higher than the average of both the faculty and the university. Students have pointed to the increase in the duration of studies and lack of information as reasons for this low mobility.

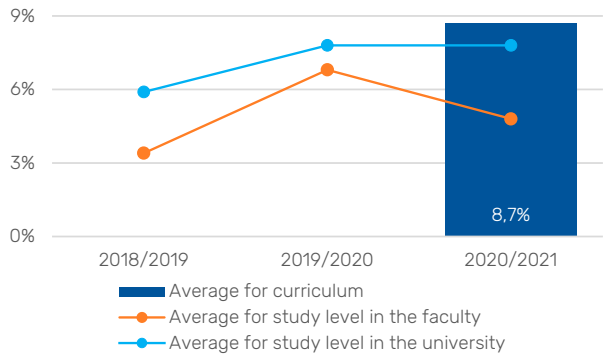

Figure 31. Proportion of students who studied abroad 2018/2019–2020/2021

To support student mobility, a mobility window was added to the curriculum in 2020, which helps students to understand which courses taken at a foreign university are taken into account when completing the curriculum. Students have the opportunity to participate in studies at UT partner universities both in Europe (at more than 10 higher education institutions) and in other parts of the world. An information leaflet on the mobility window was prepared in the spring of 2020, and information on learning mobility is also available on the university's and department's website, and via mailing lists. There is a need to share more information on the application deadlines of partner universities and the ERASMUS+ mobility programme, for example by organising learning mobility seminars.

The teaching staff often participate in foreign conferences and seminars, and they also visit working groups of foreign universities to develop cooperation projects. Due to the pandemic, travel has decreased in the last two years and has been replaced by participation in virtual conferences and online meetings.

Both the bachelor's programme in Biology and Biodiversity Conservation and the subsequent master's programmes are in Estonian. The development and use of Estonian biological terminology is considered important in the curriculum: teaching staff members compile and update study materials in Estonian, students have to submit reports and essays in various courses, and oral presentation skills are also developed. To develop oral and written expression skills in Estonian, a compulsory course with a volume of 3 ECTS has been developed for everyone. Academic Estonian language skills are developed through the preparation of a bachelor's thesis (12 ECTS). A student's verbal self-expression and argumentation skills are also demonstrated during the defence of the thesis.

Some international students who have studied Estonian thoroughly in their first year have also completed the bachelor's programme in Estonian. After graduation, they are able to work in Estonia in a position related to the field.

1.1.3. High-level research-based studies

Laboratories equipped with state-of-the-art equipment are used during studies. Choosing a specialisation and finding a thesis topic and supervisor is dealt with at the very beginning of the study programme. In the spring semester of the first year, the compulsory "Seminar in Biology and Wildlife Conservation" takes place, where the research areas and working groups of different chairs are introduced, and students study topics related to all the specialisations using the problem-based learning method. Information on research topics can also be found on the websites of the working groups and in information letters sent to various mailing lists. As some students have been concerned about the lack of information on LTMR thesis topics and choosing a supervisor, those interested can be added to the course "Introduction to Gene Technology / Molecular and Cell Biology" in the Moodle learning environment. A web-based environment is being created to bring together information on research topics, theses and supervision in the different chairs.

According to the data from 2020, 93% of the 137 academic staff at the Institute of Ecology and Earth Sciences (LTOM) and 88% of the 46 academic staff at the Institute of Molecular and Cell Biology (LTMR) have a doctoral degree. The

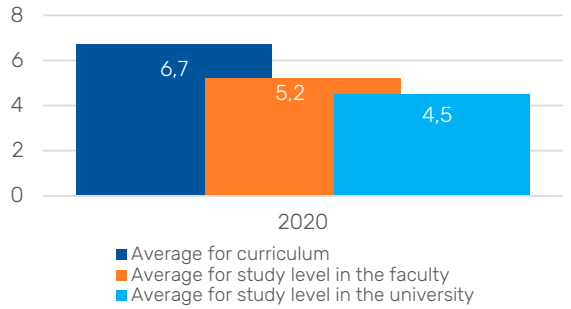

Figure 32. Number of high-level publications per teaching staff member in 2020

involvement of top researchers in the field helps to ensure science-based learning. In 2020, the academic staff of the curriculum published 6.7 high-level research publications each on average, which is higher than both the university and the faculty average. In 2020, a total of 17 international lecturers and researchers worked in the two institutes (approximately 9% of the academic staff).

In addition to the involvement of international teaching staff, doctoral studies also help to ensure the next generation of teaching staff. In the last five years, a considerable number of people have received a doctoral degree: 25 in botany and ecology, 23 in zoology and hydrology, 23 in molecular and cell biology and 17 in gene technology. The fact that the number of doctoral students admitted has decreased slightly compared to 10 years ago and the share of international doctoral students has increased may turn out to be a risk to the continuity of higher education in Estonian. Underfunding of higher education and research (including project-based research funding) is also likely to play a role in this, as it does not motivate young people to choose an academic career.

Non-university experts have been involved in teaching, especially in more applied courses such as "Conservation Biology" and "Practical Course on Protected Species". External experts have also been co-supervisors of final theses. It would be worth finding more opportunities to involve non-university experts, but the main problem is matching the lesson plan with a suitable schedule for the visiting lecturer.

Active students have the opportunity to participate in research and innovation projects as part of a research group during their studies. As part of the practical training elective, credits are also awarded for participation in joint projects outside the university. The university-wide project internship elective provides an opportunity to apply one's specialist knowledge and experience to implement a real project, including the development of teamwork skills. International scientific cooperation is mostly achieved in doctoral studies.

1.2. Analysis of the curriculum performance

1.2.1. The marketing of the curriculum and its reception has attracted the desired target group to study under the curriculum

The student places in the curriculum have been filled, and the number of matriculated students has been stable since the launch of the curriculum. An exception was the 2020/21 academic year, which saw a record number of 68 students starting their studies.

In general, the students studying under the curriculum are both motivated and capable. The first two semesters can be problematic when the more difficult courses in the base module take place (e.g. "Calculus", "Chemical Principles"). It is precisely because of the inability to cope with the general courses in the base module that some first-year students have dropped out of their studies.

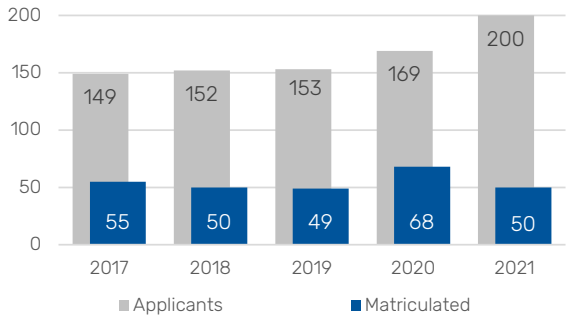

Figure 33. Number of applicants to the curriculum and matriculated students 2017–2021
Source: SAIS

The marketing of UT curricula is handled by the university's Marketing and Communication Office, as well as by the head of marketing and communications in the Faculty of Science and Technology. The students and staff involved in the curriculum have contributed to the organisation of UT Open Doors Days and information sessions in schools aimed at both upper secondary and basic school students. During the last two years, these events have taken place online.

It is important to continue to introduce the field of biology at both Open Doors Days and by visiting schools for general education. Biology workshops intended for those in grades 7-12 are held regularly at the UT Youth Academy. A travelling "bioclass" for upper secondary school students has been operating for seven years now, with the aim of introducing life sciences and biotechnology to various schools across Estonia. This project has received the national science communication award.

1.2.2. The curriculum has been thoughtfully structured

The curriculum has been created and developed in accordance with the UT Statutes of Curriculum. In addition to the mobility window and the academic Estonian course, the elective module includes courses that develop entrepreneurial skills ("Principles of Entrepreneurship", "Principles of Economics", "Business Plan", "Seminar for Project Writing").

The 2021 feedback questionnaire shows that approximately 90% of students feel they have chosen a curriculum which suits them, and they are also mostly satisfied with the choice of modules, elective and optional courses on offer. Compared to the 2016 version of the curriculum, the curriculum has more freedom of choice as regards the courses in the biodiversity conservation elective module, and students can complete 24 ECTS credits' worth of so-called booster modules (e.g. the data science module).

The teaching staff are mostly satisfied with the structure and content of the curriculum, but some weaknesses also emerged in the discussions. For example, in the "Cell Biology" course, students get a good overview of what is going on inside the cell, but the processes that take place in the extracellular matrix and the exchange of information between cells need further attention. There is also some overlap in the content of the courses. It helps to prevent excessive repetition and facilitates linking the courses into a single logical unit if the teaching staff are informed about the content of all the courses. As an initial solution, all members of the curriculum's teaching staff will be given access to the study materials for the various courses in the Moodle environment. In order to harmonise the content and workload of the courses, a cooperation seminar for teaching staff is planned.

1.2.3. Teaching and assessment support learning

Feedback given on the courses shows that there is general satisfaction with the courses in the curriculum – students understand how the courses studied will help them to manage in the future and why these courses are included in the curriculum. Feedback on the teaching of courses has been comparable to the average for both the faculty and the university. It was particularly difficult for the staff to ensure a high quality of teaching during the first corona wave in the spring semester of the 2019/20 academic year, as for several months it was not possible to teach face-to-face, including practical work.

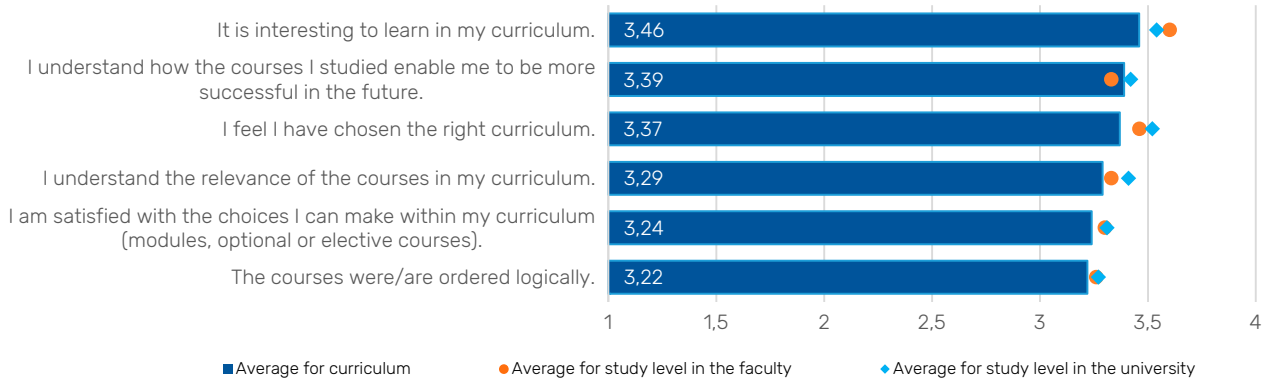

Figure 34. Students' assessment of the curriculum in the 2021 curriculum feedback questionnaire (n = 59)
Scale: 4 = agree, 3 = somewhat agree, 2 = somewhat disagree, 1 = disagree

The teaching staff are interested in student feedback and, where possible, implement changes arising from it into the courses. In recent years, several lecturers have introduced new teaching methods and increased the amount of active learning (including group work and oral presentations in seminars, etc.). The aim is to use inverted classroom methods in all courses, although some lecturers see the fact that some students are not well prepared for in-person teaching as an obstacle.

Significant changes have been made as regards assessment. The main change has been to increase the degree of continuous assessment. In many courses, the final grade is a combination of different assessment methods and tasks: in addition to a written exam, homework involving research articles, seminar presentations and other independent or group work done during the course are often taken into account. Among other things, this contributes to the development of a deep learning attitude and enables the development of general skills to be supported and assessed.

Although the development of online support for courses was considered important in the past, the spread of the coronavirus has provided a significant boost to e-learning. The e-course quality label has been awarded for online support for courses such as "Seminar in Biology and Biodiversity Conservation", "Ethology", "Invertebrates Zoology", "Field Course in Zoology I", "Biogeography" and "Exercises in Genetics". During the pandemic, a large number of lectures were recorded, the use of which in further teaching supports the introduction of the inverted classroom methodology.

1.2.4. The curriculum supports the development of competencies necessary for graduates

A list of competencies has been added to the new curriculum feedback questionnaire, on which the students can assess their own development. Discussions with students make it possible to find out more about the skills that need to be developed in the curriculum and to add courses or improve the teaching methodology accordingly.

The curriculum should certainly provide more help in making career choices. The highly rated course "Seminar in Biology and Biodiversity Conservation" in the second semester provides students with an overview of different research areas in biology and helps with the selection of a specialisation, but non-university specialists should be more involved in the curriculum courses or a separate course should be created to better support career choices. Career days have also been helpful for career planning. Led by LTMR, a bio-entrepreneurship day took place, where students received information about both traineeship offers and bioeconomy companies. In the spring semester of 2021, the LTOM Career Day was held for the first time, where institutions and companies in the environmental field also introduced their activities and traineeship opportunities. The organisation of career days must definitely be continued.

The organisation of traineeships needs to be actively improved, especially in the field of biodiversity conservation. Little use has been made of the opportunity to involve bachelor's students in the projects of the university's research groups. Participating in field and laboratory work gives students a good opportunity to apply the theoretical knowledge they have acquired in lectures to solving a real problem or performing some task. We should also consider adding a project internship to the curriculum aimed at students of our own curriculum, for which it will be necessary to find separate resources and supervisors.

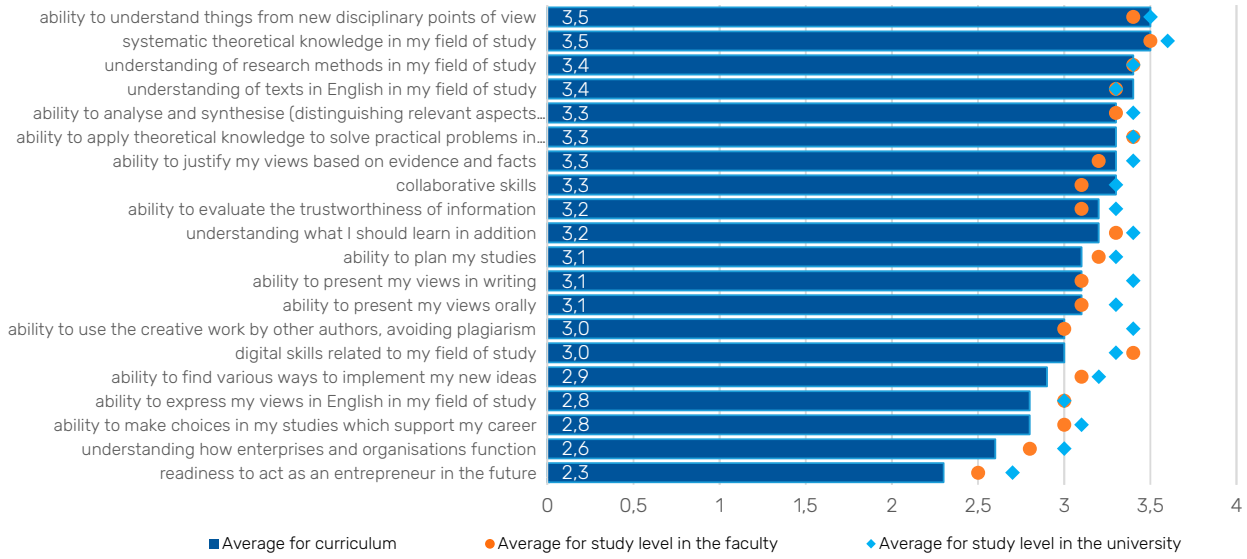

Figure 35. Students' assessment of the development of their competencies in the 2021 curriculum feedback questionnaire (n = 59)

Scale: 4 = developed a lot, 3 = developed to some extent, 2 = did not develop, 1 = became worse

1.2.5. Students successfully reach graduation

In the Biology and Biodiversity Conservation curriculum, the graduation rate of students (on average 42% graduate in four years) is comparable to the faculty average, and lower than the university average. The low graduation rate was due to the large number of students who dropped out between 2017–2019, when an average of one third of entrants dropped out during the first year. The reasons for interrupting studies are generally complex, but the placement of complicated courses (e.g. "Chemical Principles ", "Calculus") in the autumn semester of the first year played an important role. Completing these courses requires a great deal of effort from students who have not studied in a strong science class in upper secondary school. There were also problems with the content and teaching of the course "Chemical Principles". For this reason, the curriculum was changed in 2020: a "General Chemistry" course was added, aimed at students of biology, and a "Seminar in General Chemistry", which supports the completion of the chemistry course. The "Chemical Principles" course remained in the curriculum as an alternative course. After the introduction of the changes, the number of students who dropped out in the first academic year is half as low as before (on average 16%), which is similar to the university average. If this trend continues, the graduation rate will also improve.

In summary, to reduce the number of students who drop out, it is important to ensure that more complicated basic courses and specialisation courses are balanced, especially in the first semester. When teaching basic courses, it would be worth finding opportunities and tasks to apply basic knowledge to solve field-related problems even more than before. The early involvement of students in research projects and the work of research groups gives them the opportunity to feel part of the academic community and helps maintain motivation to learn. The programme director and tutors also

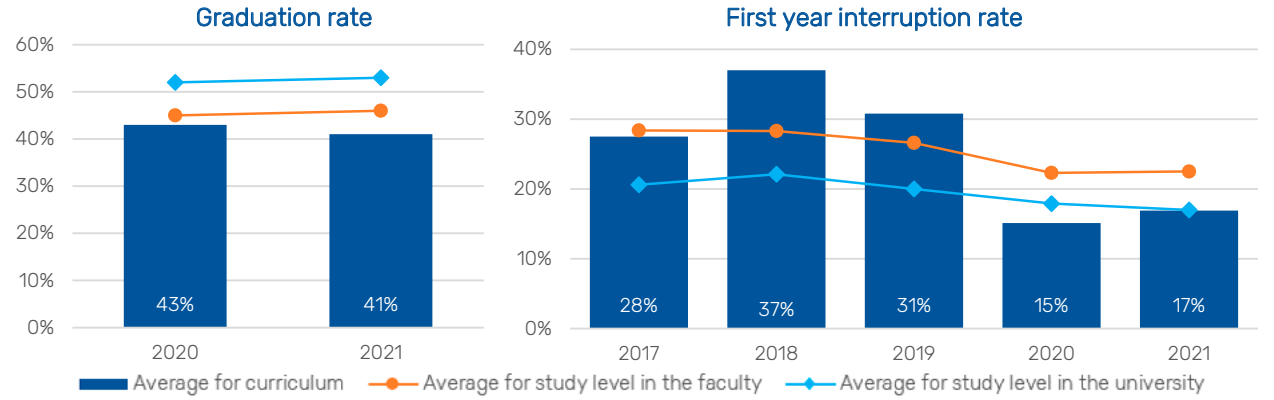

Figure 36. Graduation rate (standard duration plus one year) and the proportion of students who interrupted their studies in their first academic year 2017–2021

play an important role, as in the first year they explain the logic behind how studies are structured (basic courses in the first year and then more specialisation-specific courses).

1.2.6. The learning environment and support services support students' studies

The results of the curriculum feedback show that students are rather satisfied with the learning environment. Information systems and digital environments (Moodle, Panopto, etc.) support learning. There is less satisfaction with the physical learning environment (buildings, classrooms, etc.). The situation should be alleviated by the fact that at the end of 2021 the departments of botany and zoology moved to the shared Liivi 2 building. It is a newly-renovated functional building, where it is also planned to make a student lounge and kitchen available, amongst other facilities. In the first half of 2022, it is planned to establish a rest area for students in the Vanemuise 46 study building, where they will be able to study together as well as rest.

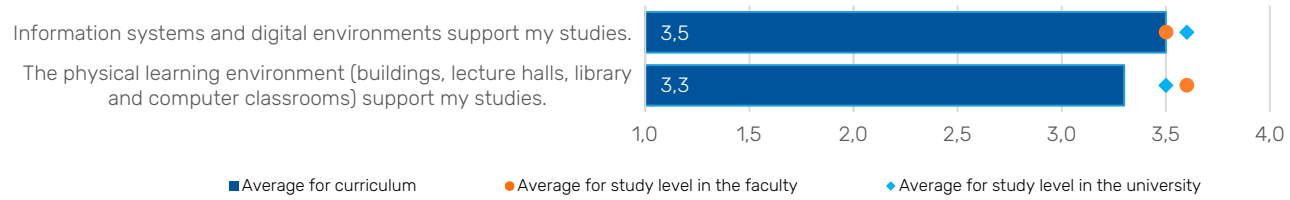

Figure 37. Average assessment of the learning environment based on the 2021 curriculum feedback survey (n = 59)
Scale: 4 = agree, 3 = somewhat agree, 2 = somewhat disagree, 1 = disagree

Students are quite satisfied with the work of the support systems. They can get assistance from academic affairs specialists, the programme director and teaching staff. The tutoring system also works well.

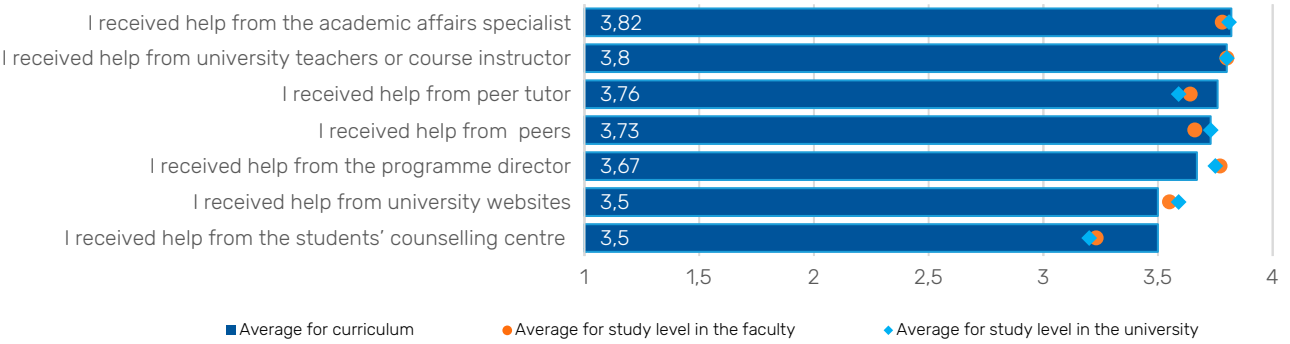

Figure 38. Average assessment of university support systems based on the 2021 curriculum feedback survey (n = 59)
Scale: 4 = often, 3 = sometimes, 2 = rarely, 1 = never

1.2.7. The organisation of studies, students, lecturers and graduates have achieved recognition

The work of the teaching staff has been recognised by both the university management and the students. Joachim Matthias Gerhold, who taught the course "Plant Physiology", received the UT Teaching Staff of the Year Award in 2017. Several teaching staff members have also been nominated for this award during the last five years (Toomas Esperk, Irina Bichele, Martin Kärner, Riho Teras, Priit Jõers, Säde Viirlaid, Indrek Zolk). In 2021, the students chose Asko Lõhmus, who teaches the course "Conservation Biology", as the best teaching staff of the year at the Institute of Ecology and Earth Sciences.

Over the past five years, within the framework of the UT Scholarship of Teaching and Learning, Lilian Kadaja-Saarepuu, Tõnu Oja and Toomas Esperk have studied their teaching on an evidence-based basis and shared their teaching experiences with colleagues. In 2019, the "Seminar in Biology and Biodiversity Conservation" Moodle course was awarded the e-course quality mark. There are other high-quality online courses in the curriculum.

In 2021, Toomas Esperk's course "Invertebrates Zoology" competed for the course of the year award at the ENLIGHT network's international conference on teaching and learning.

1.3. Summary assessment and action plan

Problematic courses in the first semester caused a large number of dropouts in the early years of the curriculum. In response to this, changes were made to the base module of the curriculum, which has reduced the number of dropouts by almost half so that it is now the same as the university average. Due to feedback from students and employers, changes should be made to the courses. The issues of global and land use change and the impact of the use of natural resources on animal and plant life could be addressed more in the Biodiversity Conservation specialisation as early as the bachelor's level. It is also important to address the issues of environmental management and law. It would also be useful to include an elective course in conflict resolution in either the bachelor's or master's curriculum. Due to growth in the volume of data and the need to analyse it, a course on the basics of programming could also be included in the curriculum, at least as an elective course.

Students' satisfaction with the learning environment is likely to improve due to the completion of the new Oecologicum study building, and a rest area for students in the Vanemuine study building is nearing completion.

1.3.1. Improving the organisation of traineeships and the ability to make career choices in the field of wildlife conservation

- Compile information on potential traineeship places, including the involvement of UT research laboratories (spring semester of the 2021/22 academic year; responsible: programme director, in cooperation with the heads of working groups).
- Address career opportunities within the Seminar in Biology and Biodiversity Conservation (spring semester of the 2021/22 academic year, staff member responsible: Marko Mägi).
- Organise a career day at the Institute of Ecology and Earth Sciences or the Departments of Botany and Zoology (a regular event, the programme director in cooperation with the institute or the heads of the chairs at the Department of Botany and Zoology, academic affairs specialists, and Marketing Specialist Marko Mägi)

1.3.2. Changes to the curriculum and the content of studies

- Ensure that the teaching staff have access to the teaching materials for other courses in order to be more aware of the content of the compulsory courses which students have taken or are taking, and to reduce content overlaps. Organise seminars for the next three years as necessary (teaching staff and study consultants).
- Include a course on ecological applications in the practical module of the Biodiversity Conservation module in order to increase awareness of the effects of global change, agriculture and forestry (the programme director's proposal to amend the curriculum in spring 2022)
- Add elective courses to the curriculum for students who have chosen to specialise in biodiversity conservation: a course in the basics of programming, and a conflict resolution course to either the bachelor's or master's curriculum. Offering an alternative to the currently mandatory course in molecular biology.
- Add the topic of the extracellular matrix and intercellular information exchange to the course in cell biology (responsible: Margus Leppik).
- Adapt the content of the Latin elective course to the needs of biology students (the lecturer is responsible).

1.3.3. Changes to the lesson plan and improving the exchange of information

- Reduce the study load of students specialising in molecular and cell biology in the autumn semester of the second year (in 2022, cooperation between academic affairs specialists for Ecology and Earth Sciences and Molecular and Cell Biology and the programme directors).

- If possible, bring forward the "Taxonomy and Biodiversity Informatics" course to spring of the first year and bring forward "Practical Course on Protected Species" to the spring semester of the second year (by 2023, academic affairs specialists and the responsible lecturers).
- Consolidate information related to studies (including study options, the organisation of traineeships, study mobility) into a single Moodle environment by autumn 2023. Advise students more often on their study choices. Solve the problem of prerequisite courses which arises when students of molecular and cell biology choose a minor specialisation in the specialisation module (responsibility of the programme director).

1.3.4. Increasing learning mobility

- Improve the exchange of information (Erasmus coordinators Pille Gerhold and Janika Vana, and the programme director). Organise regular experience seminars (the programme director will collaborate with students returning from abroad).

Members of the programme council

Andrea Jõesaar (student)
Ants Kurg (Professor of Molecular Biotechnology)
Britta Kalgan (specialist in the nature conservation bureau at the Environmental Board)
Kersti Riibak (Programme Director for the Biology and Biodiversity Conservation curriculum)
Laura Puura (student)
Lauri Koorits (CEO of Bioatlas)
Maido Remm (Professor of Bioinformatics)
Margus Leppik (Programme Director for the Gene Technology and Biomedicine curricula)
Mart Kiis (graduate)
Meelis Pärtel (Professor of Botany)
Sirelin Sillamaa (student)
Tiina Tamm (Professor of Molecular Biology)
Toomas Tammaru (Professor of Entomology)

Programme director

Kersti Riibak, Research Fellow in Macroecology at LTOM

2. ENTREPRENEURSHIP AND DIGITAL SOLUTIONS

Curriculum information

Level of study:	Professional higher education
Faculty:	Faculty of Social Sciences (SV)
Curriculum manager:	Narva College (SVNC)
Language of instruction:	Estonian
Type of study:	Block mode study
Place of study:	Narva
Curriculum volume (ECTS):	180 ECTS
Curriculum code:	205720
Curriculum approved:	26 October 2018
Additional information:	Annex 4

Table 21. Number of students studying and admitted to the curriculum of Entrepreneurship and Digital Solutions 2019–2021

	2019	2020	2021
Graduates			
Students	19	34	52
Admitted students*	19	21	20

** Matriculated students at the start of the academic year who were studying as at 10 November*

2.1. Trends in development of the curriculum

2.1.1. Ensuring the competitiveness of graduates

The main goal of the Entrepreneurship and Digital Solutions (EDS) curriculum is to teach and develop digitally competent primary and mid-level managers. The need for digitally competent managers has grown due to both the digitalisation of work environments as well as the intensified challenges of the COVID-19 pandemic, including the transformation of business processes to teleworking and the transition to so-called virtual teams. The development of the Ida-Virumaa business sector, including the creation of IT companies, is a trend in the region's development plans (Ida-Virumaa Development Plan 2019-2030+, Narva City Development Plan 2008-2024, Ida-Virumaa Fair Transition Plan). The EDS curriculum was created on the basis of the "Entrepreneurship and Project Management" professional higher education curriculum, taking into account regional needs. The aim is to contribute to the development of entrepreneurship amongst the population and to supporting the development of businesses in Ida-Virumaa. The main economics and project management courses from the previous curriculum are being used, and courses on entrepreneurship and digital technologies have been added.

The analysis of the labour demand monitoring and forecasting system OSKA states that the trend in the near future is that the boundaries between ICT and other technology areas and fields are blurring, so a large proportion of new developments, business models and jobs are created at the border of ICT and other areas. According to the OSKA report, the key issues for Estonia's development are whether we can develop Estonian companies and other organisations to maximise the digitalisation of products, services and business processes, and in turn organise education in such a way that students at different levels and in different fields get sufficient science, analytical and ICT skills while they are still at school. The EDS curriculum combines the ICT competencies described above with business and management competencies, and enables the development of learners' competencies at the intersection of several areas that have so far been treated as separate disciplines.

It is a professional higher education curriculum, the main purpose of which is to develop students' practical knowledge and skills. The logic of the curriculum structure assumes that during the curriculum the learner will go through the business process as a whole, from idea to the creation of a prototype, and in doing so will become competent at implementing business processes. The volume of the compulsory working practice module is 27 ECTS. Dividing it into separate parts (observation, enterprise, project and new product launch) gives the student vital skills, which are finding a job and applying what they have learned in the workplace.

Graduates of the college's previous entrepreneurship curriculum, "Entrepreneurship and Project Management", have found both employment and opportunities for further development, including master's studies. In 2019, 85% of graduates from the last five years were employed. Graduates of the curriculum are also members of the EDS programme council.

2.1.2. Internationalisation and the promotion of Estonian society, language and culture

A mobility window has been integrated into the curriculum, the purpose of which is to encourage students to participate in learning mobility. Students can go abroad for practical training as part of the working practice courses of their last academic year. Although opportunities for participating in international mobility have been added to the curriculum, the number of students who make use of them is still small. There are many reasons for this, but the main one is that most students work beside their studies, and longer absences from work are generally not possible. In recent years, the situation caused by the COVID pandemic has also reduced international learning mobility. Opportunities for international study experience are introduced to students when they are being advised (information sessions, cooperation with the programme director).

Although the level of study mobility is low, due to the internationalisation of the ICT sector, students have good opportunities to get acquainted with work in both multilingual and multicultural environments through internships and guest lectures. With the help of the curriculum's cooperation partners, guest lectures are held, including lectures by international lecturers. For example, in the spring of 2021, several international lecturers (from Swedbank AS) taught the course "Software Project". The curriculum as a whole supports the development of students' Estonian and English language skills (Estonian and field-specific English courses) and develops students' understanding of working in a multicultural and multilingual environment, including a virtual environment.

2.1.3. High-level research-based studies

In developing the curriculum, the needs of the labour market in Estonia and more specifically in Ida-Virumaa have been taken into account. All the courses in the curriculum are based on scientifically demonstrated knowledge, and the role of the lecturer is to act as an intermediary between the students and the latest and most important scientific approaches in the field being covered. With the available resources, the college strives to ensure the highest level of high-quality and research-based learning, but the proportion of the teaching staff who actively publish research is still modest.

To ensure the sustainability of the curriculum and research-based learning, a cooperation network has been established, which consists of academic staff from various units at the UT and other Estonian universities, as well as specialists from various organisations and companies in the field. The members of the network are engaged in both the development of studies and teaching. Thanks to the network, there are no problems in finding supervisors for final theses (according to the Study Regulations, students can also choose non-university specialists as supervisors). The course "Graduation Thesis Seminar" has been created to support students preparing their theses. The work of research groups in the field of EDS needs to be developed, including finding and implementing opportunities for applied research in the field.

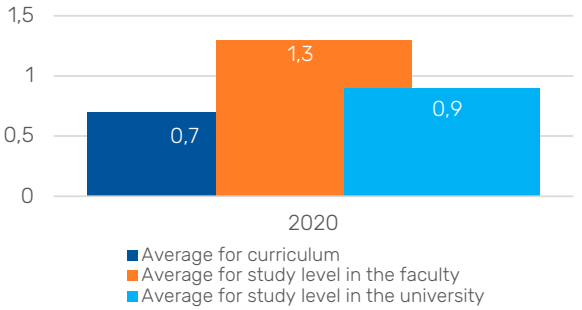

Figure 39. Number of high-level publications per teaching staff member (compared to professional higher education curricula) in 2020

2.2. Analysis of the curriculum performance

2.2.1. The marketing of the curriculum and its reception has attracted the desired target group to study under the curriculum

The marketing of the curriculum has attracted the right target group to study. According to the admission statistics, the results of the curriculum's admission campaign have been stable – an average of four people apply for each study place. Most of the applicants are from Ida-Virumaa, Harjumaa and Tartumaa. Decisions on admission are made according to the results of the test and the entrance interview. The entrance interview is designed in such a way that the answers allow to understand the applicant's suitability to study at the university and work in the field. In recent years, there have also been more applicants thanks to the fact that the block mode study under the Pärnu College's analogous "Entrepreneurship and Project Management" programme became student-funded.

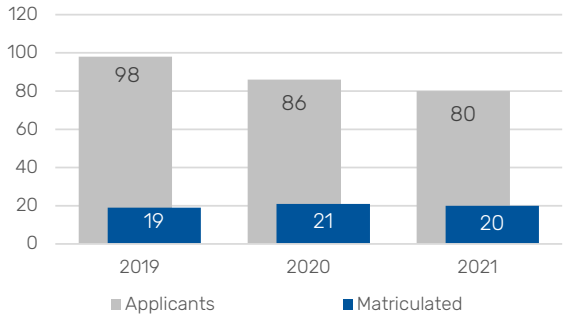

Figure 40. Number of applicants to the curriculum and matriculated students 2019–2021
Source: SAIS

On the basis of the EDS programme, it is planned to launch micro-credential programmes, which will offer in-service training opportunities to those in the labour market and, if needed, will provide an opportunity to fill vacant student places with students participating in student-funded studies.

2.2.2. The curriculum has been thoughtfully structured

The curriculum is divided into modules so that students can develop their general skills and knowledge (i.e. language learning; career planning; knowledge of economy; digital competencies, such as programming and information systems design; and business-related competencies, including team and project management). The working practice module provides an opportunity to practice what has been learned at the university.

2.2.3. Teaching and assessment support learning

It can be concluded from the students' feedback that they are satisfied that the teaching staff members are sufficiently flexible, the learning outcomes are clearly formulated, the assessment criteria and methods are clear, and the teaching staff members usually provide very thorough and clear feedback. Many students appreciate the programme director's energy and speed of response in a variety of situations related to the teacher-student relationship.

Analysing the feedback given on the courses, we can say that the highest evaluation has been given to those courses which have involved suitable specialists from the field in the teaching. They bring close-to-life and fresh examples of their practical work to the teaching of the course. Various teaching methods are used in teaching (group work, face-to-face, flexible and online learning, and an individual approach are used). In autumn 2021, the Moodle Capability Programme was launched in the Faculty of Social Sciences, as part of which the online learning environments for the courses are revised with the aim of bringing them in line with the requirements of the quality mark. Completely new online support has been added for the course "Introduction to Specialization" (3 ECTS). Moodle web support for the courses "Software Project and Team Management" (6 ECTS), "Statistics and Data Processing" (3 ECTS), "Introduction to Programming" (3 ECTS) and "Introduction into Data Science" is being created and developed.

2.2.4. The curriculum supports the development of competencies necessary for graduates

The curriculum focuses on the acquisition of the competencies described in the higher education standard; in the entrepreneurial competency model (implementation of business ideas, self-management, dealing with social situations, value-creating thinking); in the DigiComp 2.0 model (information and data literacy, communication and collaboration, digital content creation, security, problem solving); and the IT manager's professional qualification standard (technological development management, business and risk management, project management, etc.).

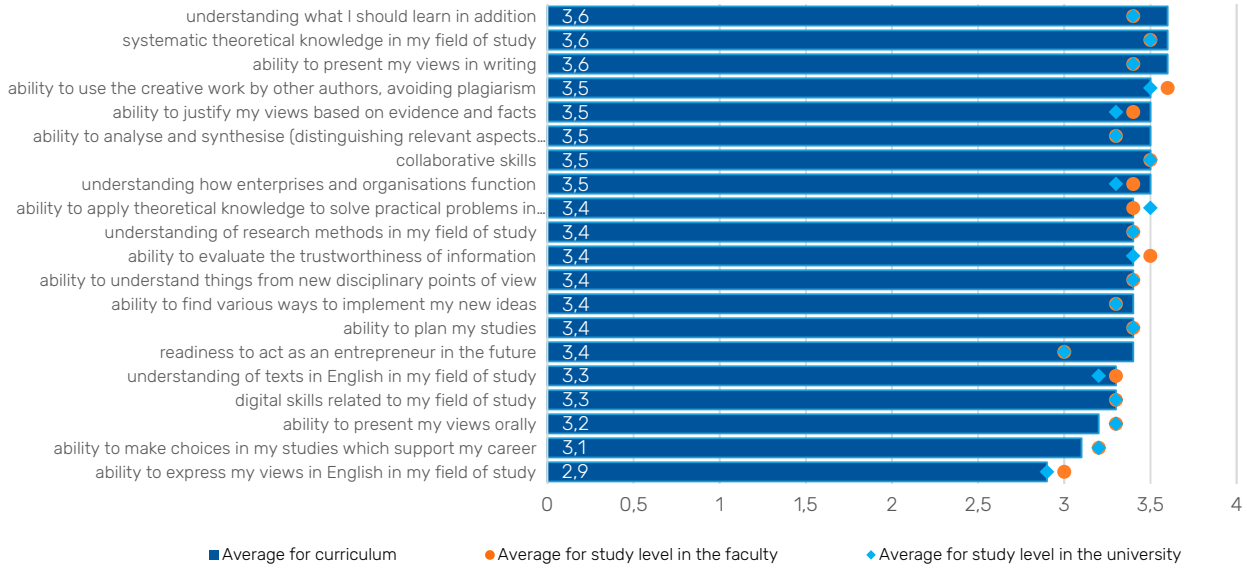

Figure 41. Students' assessment of the development of their competencies in the 2020 and 2021 curriculum feedback questionnaire (n = 14)

Scale: 4 = developed a lot, 3 = developed to some extent, 2 = did not develop, 1 = became worse

Feedback from first-year students shows that students perceive the connections between courses and feel that their competencies are developing. The development of written expression and study skills are rated more highly. The development of professional foreign language skills, oral expression skills and field-related digital competencies are rated lower. There are more courses related to specialised digital competencies in the lesson plan in the third and fourth

academic year, which is why the respondents to the questionnaire have not yet been able to study them. To develop oral expression skills, the optional course "Public Speaking" from outside the curriculum and intended for the entire college will be offered in the spring of 2022. This can be integrated into the curriculum in the future if appropriate. To develop professional foreign language skills, the inclusion of English-language teaching materials and assignments in specialisation courses is being considered.

Teaching staff members are aware of their own and their course's role in the curriculum. Among other things, they are also informed about which course or topic precedes and follows the course they teach. Several full-time teaching staff members who are involved with the curriculum also contribute to its strategic development in the programme council.

2.2.5. Students successfully reach graduation

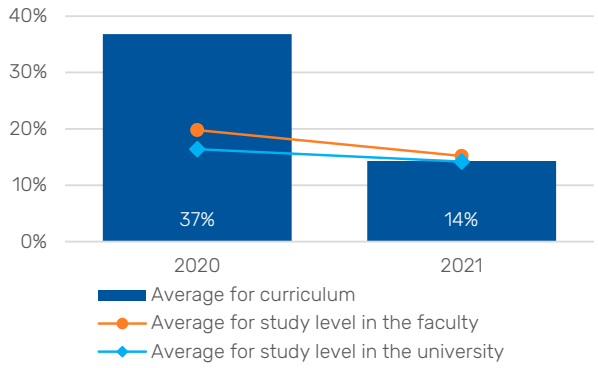

Figure 42. Proportion of students who interrupted their studies in the first year 2019/2020–2020/2021

The curriculum courses, including optional courses, are designed to minimise the number of students who drop out or suspend their studies. Students are advised to take the course "Graduation Thesis Seminar", which supports the writing of a thesis, as based on previous experiencey, writing the thesis often turns out to be a stumbling block. The university also has other support measures which help to reduce the number of students who drop out, such as making it possible for them to go on academic leave while continuing to study at their own pace and achieve the desired learning outcomes. The data for 2021 shows that the dropout rate is on a downward trend. This can be partly explained by changes to the admission requirements. Applicants must thoroughly explain their motivation to study in the given curriculum.

2.2.6. The learning environment and support services support students' studies

Feedback from students allows us to state that they are satisfied with the support services provided by the university and their quality. Inevitably, fewer EDS students are involved in the university's central services – individual students have asked for or sought information from the university's Counselling Centre, a tutor or the university's website. At the same time, the college offers free additional services to students, e.g. language assistance can be requested from employees of the college's Writing Centre. Since March 2020, psychologist Nelly Randveer has been advising students at Narva College.

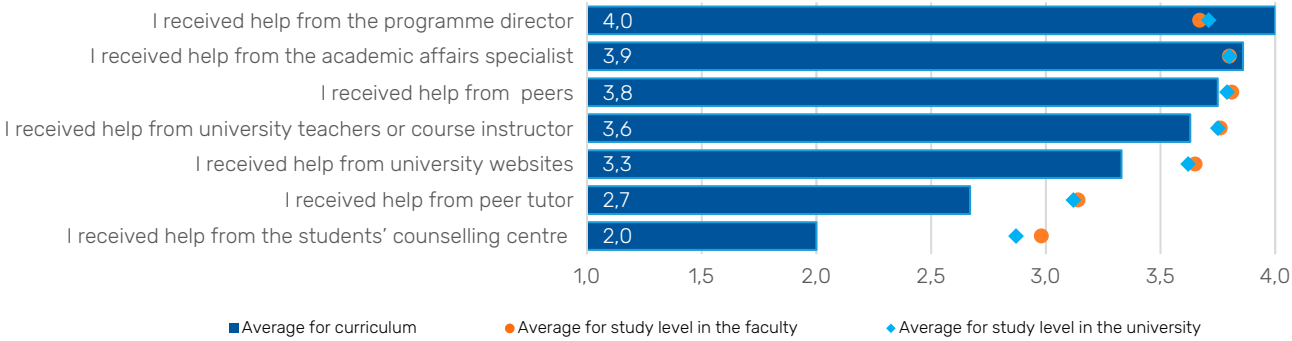

Figure 43. Average assessment of university support systems based on the 2021 curriculum feedback survey (n = 8)
Scale: 4 = often, 3 = sometimes, 2 = rarely, 1 = never

The Narva College study building was completed in 2012. Students are more satisfied with the physical learning environment compared to the average for both the university and the faculty. In recent years, the college has invested heavily in improving the use of ICT and computer technology. The college's computers have been upgraded and a variety of accessories have been purchased to support the quality of distance and hybrid learning.

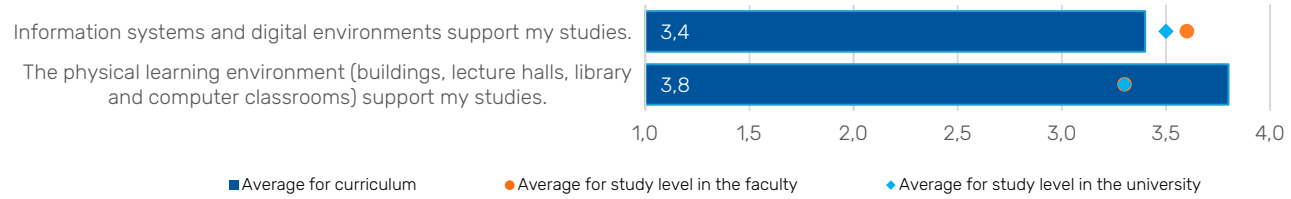

Figure 44. Average assessment of the organisation of studies and the learning environment based on the 2021 curriculum feedback survey (n = 8)

Scale: 4 = agree, 3 = somewhat agree, 2 = somewhat disagree, 1 = disagree

2.2.7. The organisation of studies, students, lecturers and graduates have achieved recognition

In recent years, the activity of people involved in the EDS curriculum has increased significantly both in society and at the university, and this has been recognised. Programme Director Denis Larchenko is actively involved in serving society, for which he has been recognised with letters of commendation and awards from both the college and faculty. In 2021, he was awarded the EBS (Estonian Business School) "30 under 30" award. He was recognised as a young person who changes and improves Estonian entrepreneurship and so ensures sustainable development.

In 2019, the Academic Affairs Specialist Maarja-Mai Lõokene was awarded a university award for her contribution to coordinating studies at Narva College and advising students. In 2018, Lecturer in Economics Jelena Rootamm-Valter received the award for a societally active employee in the Faculty of Social Sciences for research important to the region, which has had a great impact on the development of various national action strategies. In 2019, Project Manager Kristjan Klauks was recognised with the Outstanding Support Staff Member in the Faculty of Social Sciences award.

Students of the curriculum have been active participants in the STARTER programme for several years in a row, and in both 2019 and 2020 the teams reached the top ten in the Estonia-wide Kaleidoscope competition for business ideas.

2.3. Summary assessment and action plan

The curriculum functions well and takes into account the needs of society. We can be satisfied with the results that have been achieved during the first three years. Feedback from students is positive and the stable numbers of applicants show that the curriculum is popular among those entering the university. Major areas for development are linking the content of the curriculum to sustainable development (the green transition) and fair transition plans. It is necessary to continue developing and producing new Moodle courses to support consistent learning. Attention must also be paid to enhancing and developing support measures for learning mobility. All this can be done on the basis of strong cooperation with the network of teachers and companies, including the involvement of practitioners in teaching.

- Enhance cooperation with businesses. The aim is to include at least one guest lecturer from the private sector in each course in the specialisation module. Deadline: December 2022
- Enhance e-learning. Improve Moodle support for the courses in the curriculum, including making sure that the web environments for all the curriculum courses meet the quality criteria and that the elective courses are structured in such a way that they can be completed independently (based on what is in the Moodle environment). Deadline: December 2022. Collaboration between teaching staff, learning designers, and students.
- Create a community of students, alumni, teaching staff, and partners. Deadline: December 2022

Members of the programme council

Denis Larchenko (EDS Programme Director, chair of the programme council)
Ago Arro (first-year EDS student)
Evelyn Sepp (second-year EDS student)
Pille-Riin Meerits (graduate of the Entrepreneurship and Project Management curriculum)
Mari Suviste (entrepreneur in the marketing field)
Kristina Ernits (Ida-Virumaa Business Centre, tourist information consultant, graduate of the Entrepreneurship and Project Management curriculum)
Eveli Dolganova (Assistant to the CEO at Silmet AS, graduate of the Entrepreneurship and Project Management curriculum)
Mai-Liis Palginõmm (Head of the Research and Development Department at the North Estonia Medical Centre, education specialist)
Mervi Raudsaar (Associate Professor of Entrepreneurship, Head of the Chair of Entrepreneurship at SVMJ)
Jelena Rootamm-Valter (Lecturer in Economics)

Programme director

Denis Larchenko, EDS Programme Director, Senior Specialist at the SVMJ Startup Lab

3. LAW

Curriculum information

Level of study:	Bachelor's studies
Faculty:	Faculty of Social Sciences (SV)
Curriculum manager:	School of Law (SVOI)
Language of instruction:	Estonian
Type of study:	Regular study, block mode study
Place of study:	Tartu, Tallinn
Curriculum volume (ECTS):	180 ECTS
Curriculum code:	2458
Curriculum approved:	30 November 2001
Additional information:	Annex 5

Table 22. Number of students who graduated, were studying and admitted to the bachelor's curriculum of Law 2017–2021

	2017	2018	2019	2020	2021
Graduates	**191**	**166**	**178**	**168**	**192**
in Tartu	100	92	86	87	87
in Tallinn	91	74	92	81	105
Students	**792**	**805**	**802**	**755**	**696**
in Tartu	418	417	416	384	353
in Tallinn	374	388	386	371	343
Admitted students*	**239**	**258**	**231**	**188**	**191**
in Tartu	135	153	129	89	88
in Tallinn	104	105	102	99	103

** Matriculated students at the start of the academic year who were studying as at 10 November*

Table 23. Distribution of students by type and funding of studies 2017-2021

	2017	2018	2019	2020	2021
Students	792	805	802	755	696
Regular study	431	456	485	492	477
Block mode study	361	349	317	263	219
Non-student-funded places	768	788	736	669	571
Student-funded places	24	17	66	86	125

3.1. Trends in development of the curriculum

3.1.1. Ensuring the competitiveness of graduates

The development activities of the law curricula are based on the mission of the School of Law, which according to the strategic plan of the School of Law is "to shape the scientific foundations necessary for the functioning of the Estonian legal system; to educate highly qualified, responsible lawyers necessary for performing the constitutional functions of Estonia through internationally recognised high-level research and science-based teaching; and to guarantee the internationally competitive future academic generation of Estonian lawyers". Due to this mission, and taking into account the fact that a master's degree in Law is a prerequisite for working in regulated legal positions, the main focus of the School of Law is to provide five years of legal education (BA + MA) taught in Estonian. The main function of the bachelor's curriculum in Law is therefore to provide the educational foundation necessary for master's studies. On 7 June 2021, employers' representatives made a proposal to the Minister of Education and Research and the Minister of Justice for the introduction of integrated learning in legal studies, but this proposal has so far not received political support.

Graduates of the bachelor's curriculum rate their competitiveness as very good. According to a survey of those who graduated from Estonian higher education institutions between 2016-2018, in 2020, 73% of bachelor's graduates and 91% of master's graduates had a job which was either very closely or largely related to their studied specialisation. This is evidence that there is a high demand in the labour market for people who already have a bachelor's degree. In 2020, 75%

of those who graduated with a bachelor's degree in 2019 were employed (median salary 1,400 euros) and 77% of master's graduates were employed (median salary 2,244 euros).

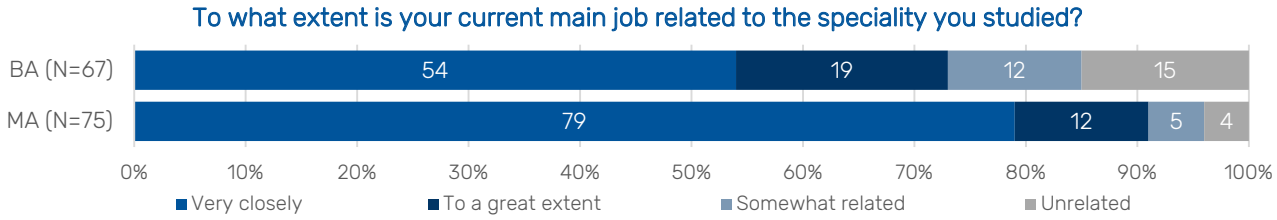

Figure 45. Relevance of the jobs of those who graduated bachelor's and master's studies in law between 2016-2018 to their studied specialisation in 2019. BA - bachelor's studies, MA - master's studies

Source: Ministry of Education and Research

In many cases, the employer expects the employee to obtain a master's degree in Law in parallel with their employment. As a result, employers have generally expressed their expectations in relation to graduates of the master's curriculum rather than those of the bachelor's curriculum. These expectations are high, with both a strong theoretical base and excellent professional skills being sought after. Some employers consider that general courses related to the wider social sciences and humanities field fall under basic knowledge, while others consider that only legal disciplines do so. Employers' understanding of which professional skills need and can be taught at the university also vary. Based on a report by the OSKA labour demand monitoring and forecasting system, it can be said that in addition to other general skills normally required in the work of a lawyer, the curriculum must also place greater emphasis on digital competences. It is also necessary to lay a strong foundation in the ability to link different fields (including legal disciplines) during bachelor's studies.

3.1.2. Internationalisation and the promotion of Estonian society, language and culture

Bachelor's studies in law are primarily aimed at studying the law of one's own country – as is also the case in other countries. However, in the context of globalisation, it is important that the student is already able at bachelor's level to gain experience in professional communication in a foreign language and get into the habit of using a foreign language alongside their mother tongue. To this end, one prerequisite of completing the curriculum is that the student studies at least 6 ECTS credits' worth of a foreign language with a legal focus. To promote foreign mobility, the elective course "International Learning Experience" (15 ECTS) has been included in the curriculum from the 2020/21 academic year. At the start of each semester briefings aimed at students about learning mobility take place and mobility opportunities are reflected in the academic self-management course for first-year students. The involvement of visiting lecturers and the participation of the international student community in studies help to promote an international environment. In order to encourage students to participate in international moot court competitions, separate courses have been created and students can get credits for participating in them.

In the summer of 2021, a study resource titled "Preparation for international moot court competitions" was published under the guidance of Associate Professor Carri Ginter. As far as possible, the School of Law also supports students' participation in international moot court competitions financially, for example by covering the registration fee.

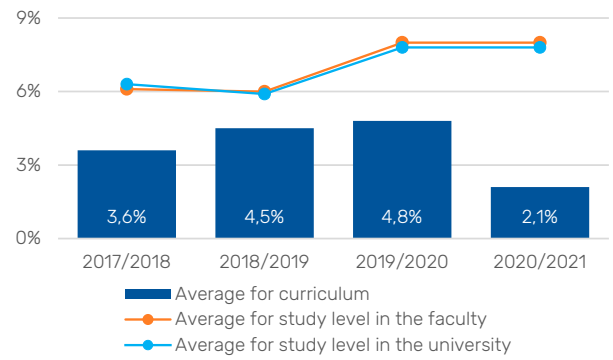

Figure 46. Proportion of students who studied abroad 2018/2019–2020/2021

Both students and teaching staff participate in learning mobility projects under cooperation agreements concluded as part of the Erasmus programme. At the same time, the COVID-19 pandemic has clearly had a negative impact on learning mobility: while the proportion of bachelor's students studying abroad showed a steady upward trend since 2016, there has been a significant decrease in the academic year 2020/21. The indicator of international mobility of students at the School of Law is lower than the average for bachelor's programmes at the university. However, one reason for this is that a considerable number of students of the School of Law study in block mode and cannot go to live and study abroad for half a year alongside their work and family obligations.

In order to develop self-expression skills in Estonian, the curriculum includes a course called "Estonian Orthography and Composition". Compulsory research written as part of the curriculum also serves the purpose of developing professional self-expression skills and is also important in the development of student research in the mother tongue. Between 2018–2020, four competitions for articles on legal topics took place as part of the Miljon+ project to develop the Estonian

version of Wikipedia. Many of the 181 articles which were submitted were written by students at the UT School of Law as homework for different courses, thereby also making an important contribution to the development of legal terminology in Estonian.

3.1.3. High-level research-based studies

The foundation for the formation of an intellectually rigorous mindset in students is the course "Basics of Legal Research and Academic Communication Skills", which is taught in the first semester. In order to cement the skills learned through practice, students write research papers and, in various courses, also do smaller assignments such as writing abstracts. Students can apply to be a teaching assistant whose job is to help a particular staff member in the preparation of studies and research.

Starting from the 2017/18 academic year, students have been obliged to write one research paper instead of the previous two; the number of research papers requiring supervision has therefore decreased, as has the burden on supervisors. This has made it easier for students to find a supervisor and has improved the quality of supervision. Both the bachelor's and master's programmes involve a number of top practitioners from outside the university in teaching to ensure that the knowledge that is transferred to students is linked to current practice. At the same time, more emphasis must be placed in the School of Law on increasing the cadre of teaching staff who have very good professional training and are proficient in modern teaching methods.

The criteria for assessing the success of research established both nationally and university-wide do not currently favour the writing of Estonian-language legal articles, monographs or textbooks as these are mostly not considered to be high-level publications (categories 1.1, 1.2, 2.1 and 3.1 in the Estonian Research Information System). However, every year the intitute's teaching staff have contributed to the publication of legal literature in Estonian, including by commenting on laws and publishing articles in the journal Juridica.

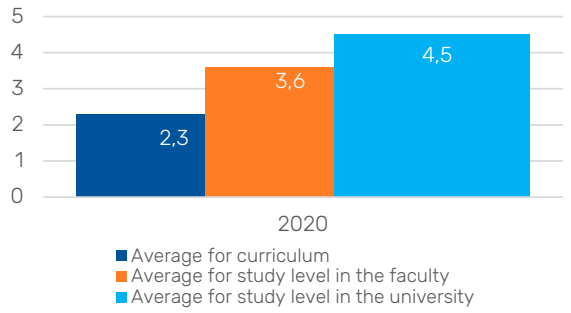

Figure 47. Number of high-level publications per member of the teaching staff in 2020

Ensuring the next generation of highly qualified lecturers has been a sore point for the School of Law for years, as the uncompetitive salary level of academic staff does not lure talented young people to choose the university as their main workplace. As a temporary solution, financial support from the Ministry of Justice has provided some relief, but it does not cover the actual needs of the institute or guarantee stability. Based on the recommendations of the international evaluation committee of the law curriculum group which were made in 2016, significant efforts have also been made in the institute to raise private money, for example participating in bachelor's studies in block mode has been subject to a tuition fee since 2019.

3.2. Analysis of the curriculum performance

3.2.1. The marketing of the curriculum and its reception has attracted the desired target group to study under the curriculum

In 2021, 203 learners were matriculated to the curriculum, which is the same as in 2020. Bachelor's studies in law have been popular with entrants to the university for years, with no reduction in applicants (except in 2019, when the curriculum became partially subject to tuition fees). Admission is based on the results of state examinations in Estonian and mathematics, with student places being filled according to the ranking. The number of applicants wishing to study law has traditionally been one of the largest in the comparison to other curricula at the UT. The marketing of the curriculum can therefore be considered a success. Interest in studying law has not diminished the fact that the threshold for applying for bachelor's studies in law (85 points out of 100) is higher than that of other bachelor's programmes at the University of Tartu (80 points out of 100). Nearly a quarter of the applicants have completed the e-course "Fundamentals of Law for Non-Lawyers", taught by the UT School of Law, which allows them to put their desire to become a lawyer to the test. It can therefore be said that the best upper secondary school graduates who are motivated to study law come to the curriculum.

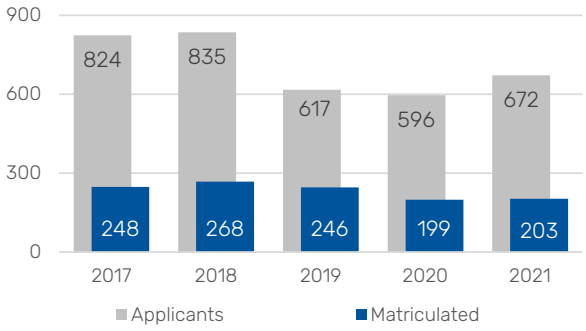

Figure 48. Number of applicants to the curriculum and matriculated students 2017–2021
Source: SAIS

3.2.2. The curriculum has been thoughtfully structured

The main features of the structure of the bachelor's curriculum in law were formed during the transition to 3+2 studies. The curriculum has been repeatedly revised since then, most recently in spring 2021. Student satisfaction with curriculum options is slightly lower than the average in the Faculty of Social Sciences. At the same time, students are satisfied with their choice of specialisation, both in the first and last year. In law, bachelor's studies have many compulsory modules and there is no possibility to choose a minor specialisation. The curriculum meets the requirements of the UT Statutes of Curriculum. In curriculum feedback, students have expressed a wish to diversify the list of elective courses. The fact that the courses taught in the first academic year are mainly general social science courses, with only a few substantively related to law, has also been considered problematic. These two complaints are related: since in the first year of study students can really only study constitutional law and the general part of civil law (also the general part of the law of obligations in Tartu), they do not yet have sufficient basic legal knowledge in the autumn semester of the second academic year which would make it possible to offer substantive elective courses. A solution has been proposed in the curriculum development working group, according to which different general courses (e.g. economics, Estonian, sociology, psychology) would be distributed more evenly over the entire period of studies and the fundamental courses of substantive law should be concentrated mainly into the first four semesters, which in turn would allow the third academic year to be focused mainly on the completion of elective courses and writing research.Teaching and assessment support learning

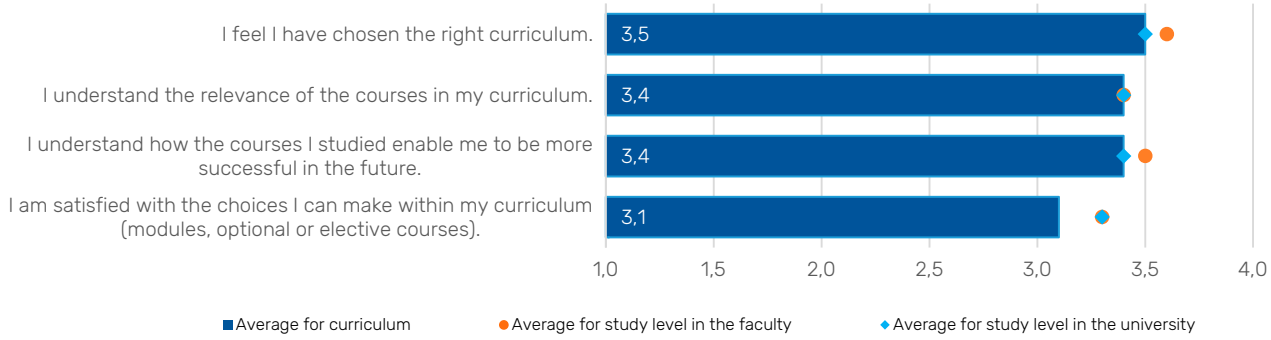

Figure 49. Students' assessment of the curriculum in the 2021 curriculum feedback questionnaire (n = 225)

Scale: 4 = agree, 3 = somewhat agree, 2 = somewhat disagree, 1 = disagree

3.2.3. Teaching and assessment support learning

Students of the bachelor's curriculum in law understand why there are specific courses in the curriculum. Distance learning caused by the COVID-19 pandemic highlighted the need to place greater emphasis on the e-environments for courses and the ability of lecturers to conduct e-learning. Some staff members managed this better, with those who had already paid more attention to the development of e-support in their courses being in a better position. Teaching staff members who were not part of the permanent staff were in a more difficult position as their methodological and educational technological knowledge and skills are not as good as those of the permanent staff members. Based on the experience of the teaching staff and programme directors, it can be said that online exams are not the preferred way of verifying knowledge in bachelor's studies, at least as far as compulsory courses are concerned. On the basis of the aggregated feedback on courses, the areas that need the most development are the diversity of teaching (i.e. that different methods are used in teaching) and feedback (i.e. that the feedback received during the course should help learners better understand what and how to learn in this course). In the assessments given on the curriculum, some learners also noted that they did not receive adequate or timely feedback from the teaching staff. The possibility of using the help of teaching assistants has made feedback in many courses more effective; however, it must be acknowledged that due to the lack of teaching staff, many lecturers are overwhelmed, which can make it really difficult for students to get feedback.

3.2.4. The curriculum supports the development of competencies necessary for graduates

In the opinion of final year bachelor's students, for example, the ability to express their views in a foreign language and to plan their studies have improved during the course of their studies, as have field-related digital skills. In the opinion of learners, the institute could better develop entrepreneurial skills, cooperation skills and the ability to make career-supporting choices in their studies through the curriculum. In both areas, the initial necessary changes have been made at the curriculum level – "Basics of Entrepreneurship" and " Business Plan" have been included in the curriculum as elective courses; in the elective course in academic self-management for first-year students where modules related to learning skills have been made more substantive, the course has been supplemented with materials introducing the different professions in the legal field. A final assignment for the course has also been added which, in the first semester, guides the student to prepare their structured study plan based on their choice of specialisation. There is certainly

room for improvement in that the teaching staff could plan the activities expected of students in their courses more consciously and in coordination with the programme director, in such a way that these would enable them to develop the competencies necessary for the graduates of the curriculum.

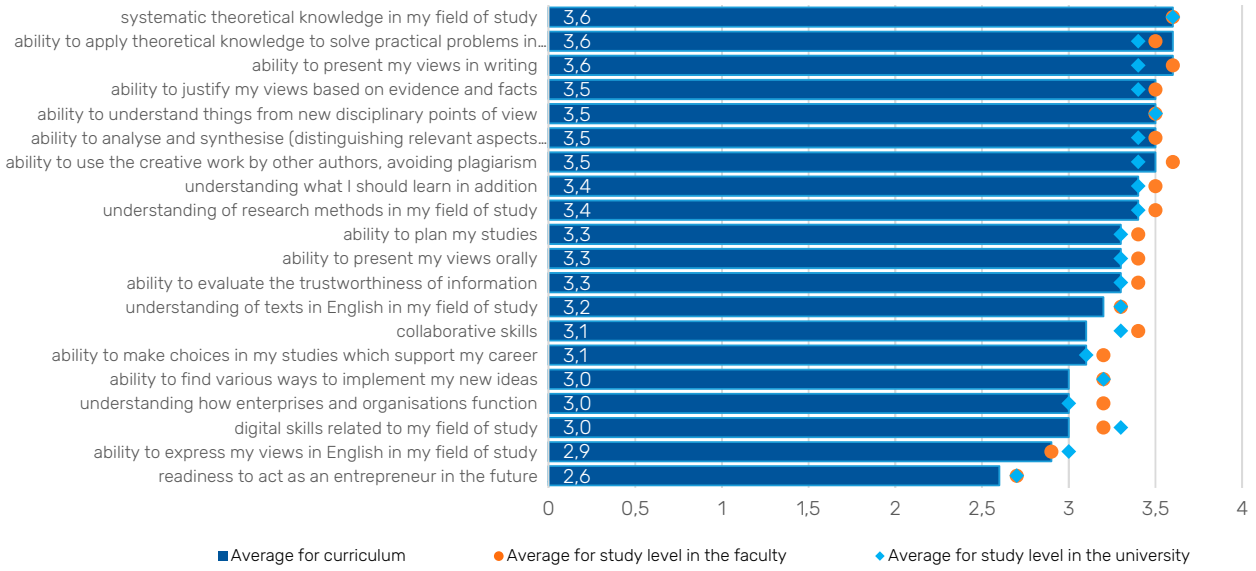

Figure 50. Students' assessment of the development of their competencies in the 2021 curriculum feedback questionnaire (n = 255)

Scale: 4 = developed a lot, 3 = developed to some extent, 2 = did not develop, 1 = became worse

3.2.5. Students successfully reach graduation

The ability of bachelor's students in law to successfully graduate (graduation rate) has been stable in recent years, slightly above the university average, but somewhat lower than in the Faculty of Social Sciences in general. The graduation rate may be positively influenced in the future by the fact that for block mode study aimed at learners with jobs, the duration of studies has been extended from the current three years to four years from 2019. At the same time, it must also be taken into account that block mode study is paid – the so-called coronavirus pandemic negatively affected the incomes of many households and this was felt in block mode study, where some students have not been able to pay tuition fees and have decided to discontinue their studies. The proportion of students who interrupted their studies during their first academic year is higher in the bachelor's programme in law than the average for the faculty. Here, too, it must be taken into account that some of those who dropped out are block mode students, for whom the payment of tuition fees has proved more challenging than initially thought. Compared to 2019, the first year dropout rate increased in 2020 (2019 – 15%, 2020 – 18%), which may again be due to the impact of the coronavirus pandemic: first-year students may have found it difficult to motivate themselves to study in the form of online learning and to see the links between what they are learning and their future work, and the impact of the pandemic on learners' income may also be felt. The elective course "Academic Self-management for Law Students", taught in the first semester, helps students to better understand the structure of their curriculum and the opportunities it offers, as well as how to plan and manage their learning more effectively.

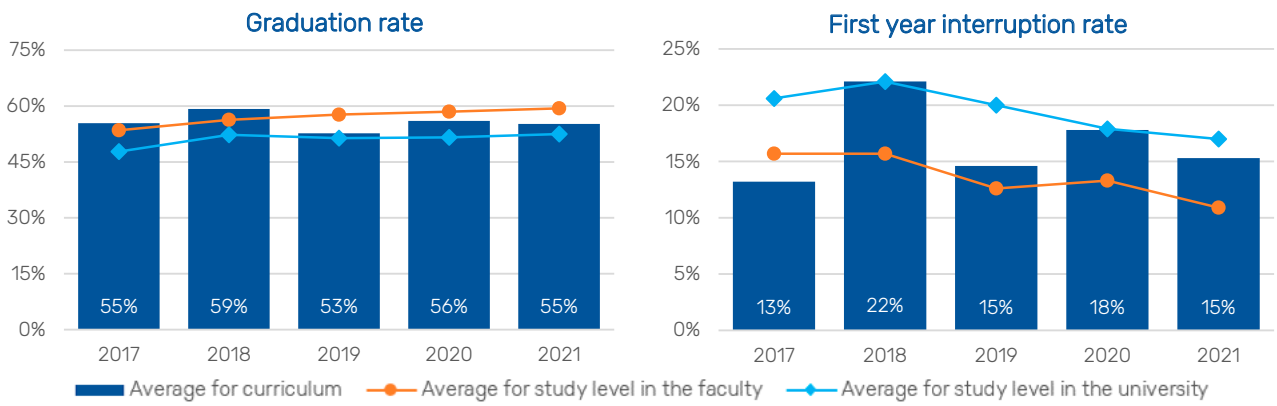

Figure 51. Graduation rate (standard duration plus one year) and the proportion of students who interrupted their studies in their first academic year 2017–2021

3.2.6. The learning environment and support services support students' studies

The assessments given by students of the bachelor's curriculum in law on digital tools and the physical learning environment are lower than for both the faculty and the university as a whole. In terms of digital environments, this may be due to the impact of distance learning, which can be more demanding as far as online environments are concerned. Among the problems related to the physical learning environment, the deterioration and poor condition of the Tallinn study building has been highlighted. A solution to this problem is being sought in cooperation with the Estates Office of the university. At times, it is also problematic for students to receive the necessary educational literature, which is due, among other things, to the fact that the institute's meagre budget does not permit the purchasing of items for the institute's information centres in the amounts desired by students. Positive developments can be seen in the activities of the publishing house that publishes law textbooks and reviews of laws, as it has been constantly improving the list of publications available online at a favourable price.Summary assessment and action plan

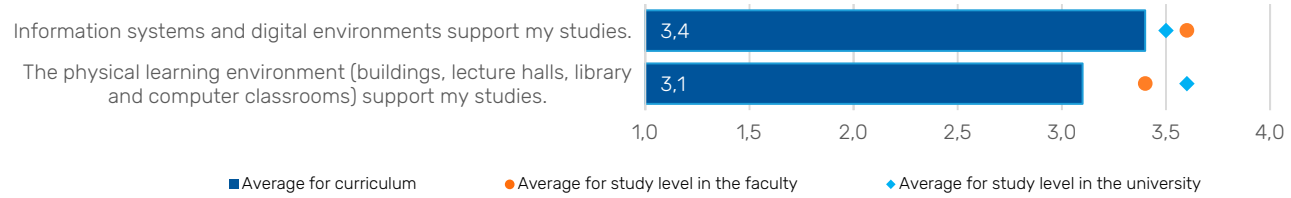

Figure 52. Average assessment of the learning environment based on the 2021 curriculum feedback questionnaire (n = 225)
Scale: 4 = agree, 3 = somewhat agree, 2 = somewhat disagree, 1 = disagree

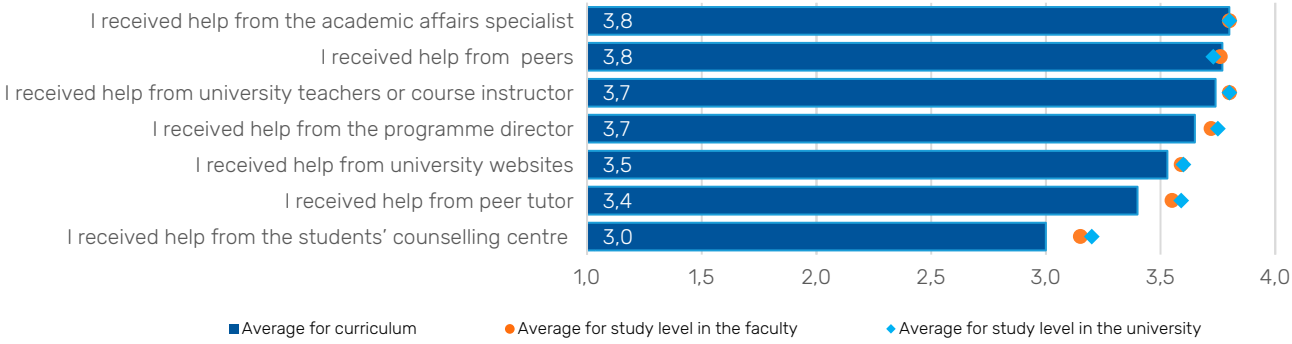

Figure 53. Average assessment of university support systems based on the 2021 curriculum feedback questionnaire (n = 225)
Scale: 4 = often, 3 = sometimes, 2 = rarely, 1 = never

Of the support services available, students have rated the help offered by academic affairs specialists the highest, while first-year students have also received more help from programme directors and teaching staff compared to students in their final year. Due to how study-related tasks are divided in the School of Law, these assessments are expected because the first source of information for students, the person who answers questions and provides advice is the academic affairs specialist; the programme director solves rather more complex or non-standard issues. Furthermore, first-year students at the School of Law will also be able to receive help and advice during the first semester from tutors or student advisers, who are more senior (usually second-year) students.

3.2.7. Improving the organisation of traineeships and the ability to make career choices in the field of wildlife conservation

The curriculum's elective courses "Academic Self-management for Law Students" and "Public Procurement Law" received the e-course quality mark in 2021. In autumn 2021, the e-support developments of several courses of the curriculum were recognised with the faculty's financial support measure (the general part of civil law, encyclopedia of law, constitutional law, contract law, administrative law, the basics of legal research and academic expression skills). Research carried out by bachelor's students has won awards in a competition for private and public law and legislative research by the Ministry of Justice, as well as in the "Court of Appeal 100" competition by the Ministry of Education and Research, Tallinn Circuit Court, Tartu Circuit Court and the Estonian Academic Law Society. Students successfully participated in international moot court competitions. Wikipedia articles created by bachelor's students have also been repeatedly awarded prizes in competitions for legal articles organised as part of the Million+ project. The teaching staff of the bachelor's curriculum have received recognition both at the University of Tartu (e.g. Prof. Lauri Mälksoo – University of Tartu Medal, 2021; Prof. Raul Narits – "100 semesters at the University of Tartu", 2021; Maie Ruus – "100 semesters at the University of Tartu, 2020) and outside the university (Prof. Irene Kull – Order of the White Star, 4th class, 2021).

3.3. Summary assessment and action plan

The curriculum is popular, and based on the tight competition and high application threshold, it can be said that strong and motivated students are selected for bachelor's studies in law. In recent years, Moodle environments have been developed for the courses and the submission of research has been transferred to Moodle. The course on the basics of research has been made significantly more practical than before, and a course on academic self-management has been created to develop students' study skills and facilitate more informed choices in the curriculum. It is necessary to strengthen the methodological teaching of law, and it would also be useful to review the various basic social science courses (economic theory, psychology, sociology) and to redesign their content to make it more relevant to the specialisation. In order to encourage more diverse teaching and assessment in courses and the development of general skills, it is necessary to review the learning outcomes set out in the syllabuses. In order to reduce dropouts resulting from disappointment in the specialisation and to provide students with a more substantial list of elective courses, major restructuring needs to be made in when courses are taught, moving more relevant courses in law to the first academic year.

- Complete the revision of the curriculum during the spring semester of the 2021/22 academic year — curriculum development working group and institute council.
- Syllabus revision: revise and organise the wording of the learning outcomes and the list of required courses — teaching staff and programme directors in collaboration with an academic consultant (autumn 2022).
- After the revision of course syllabuses, map out the needs related to educational literature — teaching staff and programme directors, information centre staff (spring 2023).
- Map out field-related digital competencies and integrate digital competencies into course syllabuses — teaching staff and programme directors in cooperation with an academic consultant (spring 2023).

Members of the programme council

Age Värv (chair of the programme council, Programme Director for the bachelor's and master's curriculum in Tallinn)
Mario Truu (doctoral student)
Eleri Reed (master's student)
Marijell Niinepuu (bachelor's student)
Ahto Kink (Head of Legal at Bolt)
Heddi Lutterus (Deputy Secretary General of the Ministry of Justice)
Tarvo Puri (notary)
Andres Parmas (Prosecutor General)
Hannes Vallikivi (sworn advocate)
Ivo Pilving (judge of the Supreme Court, chair of the Administrative Law Chamber)
Marju Luts-Sootak (Professor, Assistant Director of Research)
Merike Ristikivi (Associate Professor, Programme Director for Doctoral Studies)
Mari-Liis Lipstok (Programme Director for the bachelor's and master's curriculum in Tartu)

Programme directors

Age Värv, Associate Professor of Law of Obligations, Assistant Director of Academic Affairs of the School of Law
Mari-Liis Lipstok, Programme Director for Continuing Education at the School of Law

4. INTERNATIONAL RELATIONS AND REGIONAL STUDIES

Curriculum information

Level of study:	Bachelor's studies
Faculty:	Faculty of Social Sciences (SV)
Curriculum manager:	Johan Skytte Institute of Political Studies (SVJS)
Language of instruction:	English
Type of study:	Regular study
Place of study:	Tartu
Curriculum volume (ECTS):	120 ECTS
Curriculum code:	129657
Curriculum approved:	20 June 2014
Additional information:	Annex 6

Table 24. The number of students who graduated, were studying and admitted to the IRRS curriculum 2017–2021

	2017	2018	2019	2020	2021
Graduates	7	24	24	20	32
Students	72	72	73	72	77
Admitted students*	29	27	29	20	38

** Matriculated students at the start of the academic year who were studying as at 10 November*

4.1. Trends in development of the curriculum

4.1.1. Ensuring the competitiveness of graduates

The International Relations and Regional Studies (IRRS) programme combines comprehensive study of international relations as an academic discipline with practical experience in the field. The programme targets those who plan a career with an international focus, be it in diplomacy, public service, the private sector or with non-governmental organisations. It develops a range of general-purpose skills and competencies necessary for such careers, and equips students with knowledge that enables them to pursue research-oriented careers or continue studies at the doctoral level. It contributes to the sustainable development of the IR field in Estonia that foresees the training of international relations specialists with a regional specific focus. Given that IRRS is an international programme which competes for the best students in the world-wide educational market, then the trend towards illiberalism, combined with nationalistic sentiments which are also gaining ground in Estonia, may affect the programme's sustainability by reducing the number of prospective student candidates. Another factor having an influence on the programme is the saturation of the labour market. In 2017-2021, 108 students from 28 countries graduated from the IRRS programme. The biggest share of graduates came from Estonia (26%), followed by the USA (10%) and Germany (8%). Out of 106 IRRS graduates, 43 found jobs in Estonia (41%); of those 56% were taken by Estonian nationals. The jobs which were in some way related to IR/PolSci were as follows (50 cases in total):

- Ministries/governmental agencies (desk officers, advisors, experts, specialists, policy analysts, diplomats): 18
- Researchers/project managers/specialists/analysts: 14
- Studies (1 MA/4 PhD): 5
- Other (teachers, trainees, freelance journalist, podcast editor, communication officer, consultant): 13

Some of the 'dream jobs' obtained in the field of IR included roles such as Political Officer at the EU External Action Service, EUDEL Moscow; 2nd Secretary at the Estonian Embassy; Diplomat in Permanent Mission of Estonia to the UN; Senior Desk Officer at the Ministry of Culture of Latvia, International Cooperation and EU Policy Division; Legislative Policy Analyst, Florida State Government. Professions not related to IR/PolSci (56 cases in total) fell into the fields of digital marketing, tech entrepreneurship, ICT and financial services, consultancy, logistics, social work, and customer services. Estonian nationals have a better chance of finding a job related to their studies in Estonia.

4.1.2. Internationalisation and the promotion of Estonian society, language and culture

The IRRS programme has met the goal of the internationalisation of the Estonian higher education field by attracting very good students from all over the world. On average over the past seven years (2015-2021), the IRRS programme has received 200 student candidates per 25 student places every year, being especially popular among Azerbaijanis, Estonians, Nigerians, Ukrainians and Georgians. Estonian students have made up an average of 10% of all candidates and about 25% of the student cohort each year. The IRRS programme is built on modules that comprise different courses, which are easily transferable in case students opt for study abroad during the third semester. Students are advised to choose their host university based on their specialisation track, e.g. those specialising in European studies are best placed in leading partner universities closer to EU institutions, etc. There is a double degree MA programme based on the existing MA programmes of IRRS and East European Studies (OES, Freie Universität Berlin). When studying at FUB, students have to study within the politics profile of the partner institute (Osteuropainstitut). The first two semesters are spent at the student's home university, and the third is spent in the partner university. The fourth semester can be spent either in Tartu or Berlin. In addition, IRRS also participates in a double degree programme with University College London, though only in the capacity of receiving students from that institution.

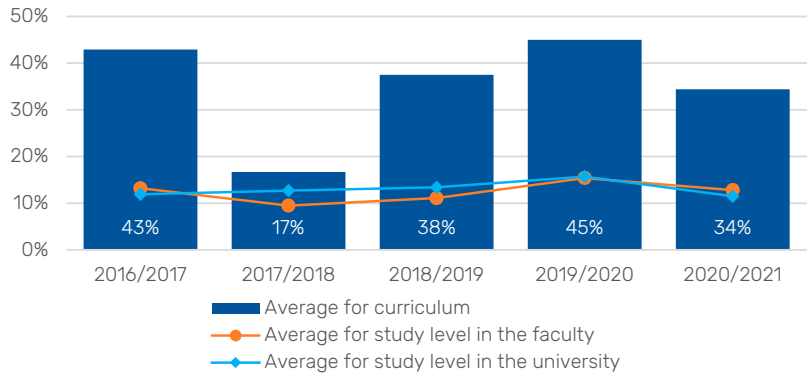

Figure 54. Proportion of students who studied abroad 2016/2017–2020/2021

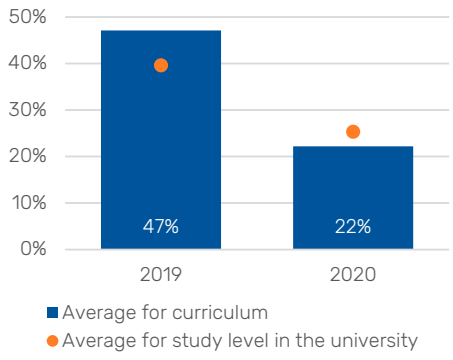

Figure 55. Proportion of international students who took an Estonian language course in 2019 and 2020

The IRRS programme is included in the Erasmus Mobility scheme with 58 partner universities from 17 EU member states and 30 partner universities from third countries. The most popular destinations for IRRS students during 2016-2021 were the University of Glasgow, Jagellionian University Krakow, KU Leuven, FU Berlin and Charles University Prague. In the years 2016-2021, about 45% of IRRS students spent their third semester abroad. There has been no need to train international students specifically for working in Estonia – the programme is designed to prepare graduates for contemporary working life in a variety of sectors and countries.

As demonstrated above, international students have been successful in obtaining jobs in both Estonia and abroad. Among the 2017-2021 graduates, 31 non-Estonian students (39%) took Estonian language elementary course. Many international students also participate actively in various networks and opportunities designed to familiarise international students with Estonian culture and society (organised by Erasmus Student Network Tartu, etc.).

4.1.3. High-level research-based studies

Based on the QS World University Rankings by Subject [Political Science & IR], the research conducted by faculty members teaching in the IRRS programme ranked as high as 101-150 in 2019. High-level publications per member of the teaching staff per year was higher than in the other fields of Social Sciences on average (5.1 compared to 4.4). Among the top publishers are Eiki Berg (1,834 citations, h-index 24), Andrey Makarychev (1,968 citations, h-index 22) and Viacheslav Morozov (1,515 citations, h-index 17).

The IRRS programme has aimed to provide theoretical and methodological knowledge combined with the development of practical skills in a balanced way. The programme engages professionals of high international standing whose teaching and training activities are largely based on their own research or practical experience.

Every single course provides the state of the art in its specific field of research and demonstrates the applicability of theory in practice through various case

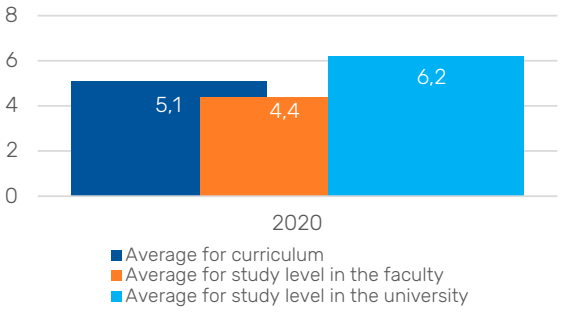

Figure 56. Number of high-level publications per teaching staff member in 2020

studies and course assignments, carried out by students individually or via group work. The programme has developed a strong methodology base for guiding students in their search for proper research design dependent on their own research question. From time to time, top level researchers/practitioners pay their visits to the institute, give guest lectures as part of the existing courses, or alternatively, offer short and intensive training in the form of master classes.

The IRRS programme does not hold master's seminars, which means that students are expected to apply their learned methodological skills in cooperation with their supervisors while preparing their master's thesis. Students, after receiving a comprehensive overview about the research profiles of faculty members, are also expected to approach supervisors whose research interests may best match their own. How things work out in the end is relatively unpredictable and depends on various factors. In most cases, supervisors take their tasks seriously, and demonstrate their availability and willingness to offer guidance on students' research activities. The best results are achieved when students can participate in research projects and write their theses based on collected and analysed data as part of their work. This is a widely used practice in the IRRS programme.

4.2. Analysis of the curriculum performance

4.2.1. The marketing of the curriculum and its reception has attracted the desired target group to study under the curriculum

During the last five years the IRRS programme has been one of the top 5 English-taught programmes at the UT in terms of competition to one study place. Although the official number of expected student places to be filled was 25 between the years 2017-2020, and has been 30 since 2021, the actual admission has varied from year to year due to overbookings and differing cancellation rates. The year 2017 was perhaps the most competitive when 214 candidates from 48 countries competed for 25 student places, and ultimately 31 students started their studies in the IRRS programme. The year 2019 was the least competitive with 146 candidates, whereas the highest number of dropouts occurred in 2020 (due to COVID-19 travel restrictions), when only 20 students were matriculated. Overall, the students admitted have been geographically diverse, accomplished, highly motivated, with proven academic track records, extracurricular activities, and accomplishments, and in some cases have already had significant work experience in the field.

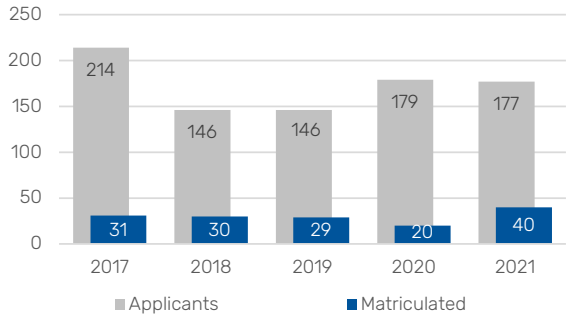

Figure 57. Number of applicants to the curriculum and matriculated students 2017–2021
Source: SAIS

4.2.2. The curriculum has been thoughtfully structured

The IRRS programme follows a logical sequence according to which fundamental knowledge provided by introductory courses comes before more specialised and regionally-focused themes. This applies both in the IR core module and methods module, where courses such as "International Relations" and "Social Science Methodology" pave the way for more specialised conceptual and methodological approaches, respectively. For instance, the "International Relations" course is a foundation for courses such as "Foreign Policy Analysis" and "Security Politics", and these two form the foundations for courses such as "Diplomacy", "Russian Foreign Policy" and "Security Challenges in Asia Pacific".

A problem which often occurs has to do with the sequence in which these courses appear in the study schedules. Namely, it can easily happen that the third order courses are taught before the second order courses. This is explained by the fact that although compulsory courses from the IR core module and methods module are taught every year, compulsory courses from the specialisation tracks are taught every third semester, and elective courses supporting IR or regional specific knowledge building are taught every fourth or fifth semester. Having a course with less than 10 students does not make sense. Many see the IRRS programme as flexible enough, giving the opportunity to further specialise according to one's own interests and needs. This may end up with the majority of students leaning either towards the European studies or Russian and Eurasian studies specialisation track while leaving Baltic Sea Region studies less populated. Students do not like that deadlines for course assignments often pile up at the end of the semester. They would have expected to learn more about world governance (international organisations) and a broader range of world regions, including the Middle East, Africa, East- and Southeast Asia, and Latin America. However, the expertise for this is not available here. Broadly speaking there is a lot of satisfaction with the chosen programme (3.6/4.0), which is higher than the average for the same study level at the university

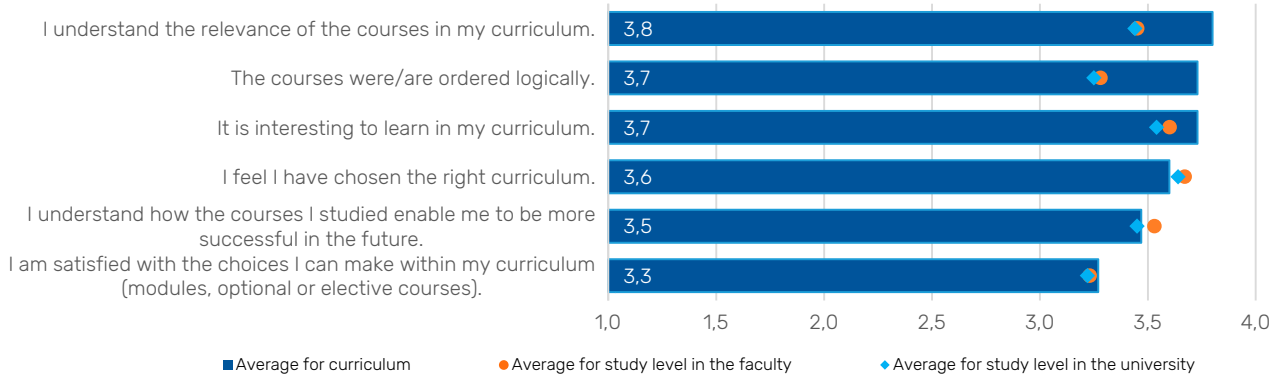

Figure 58. Students' evaluation of the curriculum in the 2021 feedback questionnaire (n = 15)

Scale: 4 = agree, 3 = somewhat agree, 2 = somewhat disagree, 1 = disagree

4.2.3. Teaching and assessment support learning

The IRRS programme is constantly striving to improve the quality of teaching, therefore use of active learning methods, the flipped classroom technique, problem- and project-based learning is now widespread. As a general rule, all instructors use interactive methods intensively to support active learning and the application of knowledge i.e. applying theory in real-life situations. The intellectual and transferable skills that are developed, demonstrated, and put into practice throughout the IRRS programme emerge within the wide range of learning strategies and practical skill tasks utilised within the courses that comprise the programme, including targeted research exercises, essay/project/policy writing activities, peer-group tasks, seminar discussion and facilitation and fieldwork experiences. In general, the feedback given on the teaching methods used in the curriculum, forms of study, evaluation of learning outcomes, and organisation of studies has been positive. Students appreciate interactive learning methods, where instead of lectures they have a hands-on approach. Any criticism in relation to teaching methods has been very constructive and has been taken into account by the teaching staff and administration.

The feedback on teaching staff and supervisors has also improved over the years. A few faculty members have received negative feedback owing to difficulty of the course (e.g. qualitative methods in social sciences), different teaching styles in the case of international lecturers, or the teaching skills of a lecturer. Support is therefore also provided to teaching staff, and often feedback outcomes are taken into consideration as a starting point. Feedback is discussed with the teaching staff member and, if applicable, the possible reasons for a low total grade are found out. As teaching involves teaching staff from outside the University of Tartu, feedback is the basis for deciding whether inclusion of a particular person in the programme is justified and whether the person provides the level required by the university. Otherwise, teaching staff are constantly trained in various topics related to providing feedback, improving teaching practices, introducing new methods in teaching, digital skills development, etc. Simulations and study trips form an important part of extracurricular activities, and are highly appreciated.

The development of self-motivated independent learners is achieved through three interlocking dimensions: knowledge acquisition, skills training and the curriculum structure. The IRRS programme is designed to convey knowledge in various forms of teaching practice and at all levels, ranging from the general to the specific. Knowledge-based courses are supported by training in lifelong professional and transferrable skills that enable graduates to take on a variety of career pathways. Lastly, they are structured in a sequence that fosters a cumulative learning process and facilitates on-time completion. Existing modules and courses promote learner ownership, self-directed learning, simulations and group work that develops practical and social skills. Feedback highlighted several issues with how master's theses were supervised, which were solved by balancing the supervision loads through group supervision.

An unequal distribution of the workload has been tackled by increasing the volume of e-learning at the expense of classroom work. Teaching assistants, especially in large-scale courses, are employed, and the volume of certain courses divided over several semesters. The emergency situation declared in March 2020 required all teaching activities to be promptly and drastically transferred to the online environment. The overall experience of transferring courses to digital mode made it possible to lay out a clear road-map for preparing and training its teaching staff members; bridging the gap in students' digital skills, upgrading the ICT infrastructure; and ensuring a high-quality standard for study materials designed for the online environment. In general, this helped a lot to integrate the training of digital skills from both sides, i.e. teaching staff and learners, as well as set the goals for future development.

4.2.4. The curriculum supports the development of competencies necessary for graduates

The IRRS programme introduces the main theories that shape international relations. It also offers a deep focus on methodological elements and supports students who want to pursue an academic career, for instance by continuing with a PhD. Students highly appreciate the development of research and analytical skills – creating connections/

making inferences, conceptualising/applying research methods. They also mention the emphasis that has been put on developing critical, innovative and creative thinking, evidence-based reasoning, and self-expression in oral and written forms. According to some student voices, the tools provided for working in the private sector are missing. Some also view that this programme lags behind in the provision of courses to improve social networking, managerial skills, and digital skills in general. Even more criticism is made of the fact that the IRRS programme does not provide support in entrepreneurship or guidance on career choices. This might be true in essence but given the almost 50% share of 2017-2021 graduates who have ended up in digital marketing, tech entrepreneurship, ICT and financial services, consultancy, logistics, and customer services, there is no serious reason to believe that the IRRS programme should do more than simply developing the competencies and general-purpose skills necessary for careers related to international relations.

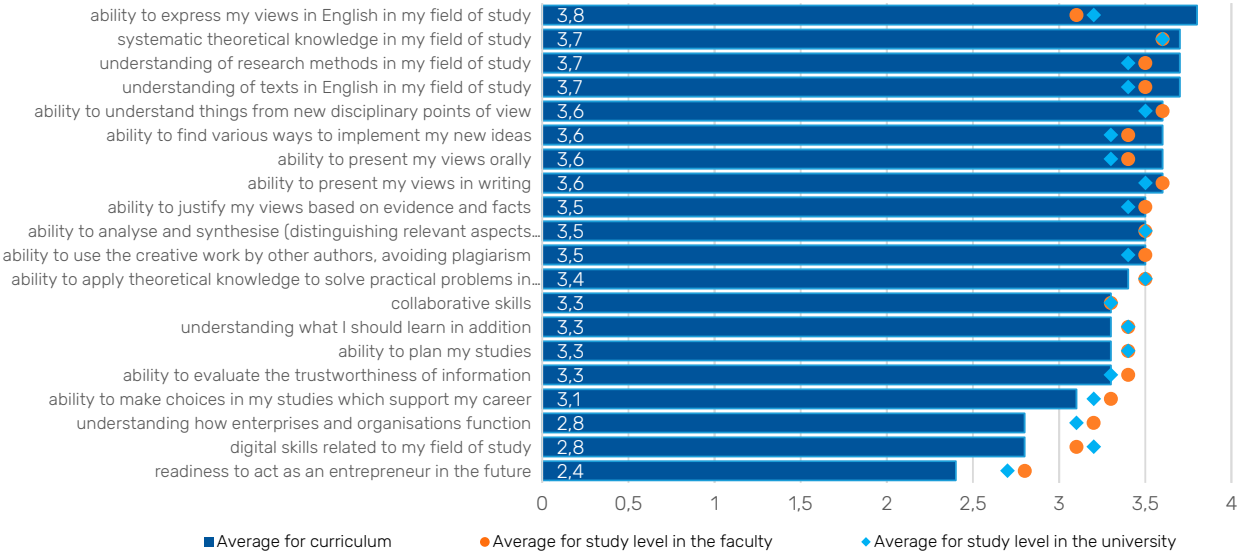

Figure 59. Students' evaluation of the development of their competencies in the 2021 curriculum feedback questionnaire (n = 15)

Scale: 4 = developed a lot, 3 = developed to some extent, 2 = did not develop, 1 = became worse

4.2.5. Students successfully reach graduation

Although the educational level of students has fluctuated over the years, students have become more advanced when entering the programme than before. Several years of experience also add value to selecting the best students. This is also reflected in the graduation rate, according to which more than 70% of IRRS students graduated their studies within the standard duration (n+1 year) in recent years. These figures are about 10% points higher than the average indicators for the same study level in the university as a whole. The dropout rate has been relatively low, even despite the extraordinary way that studies were organised during the pandemic. Moreover, the statistics do not reflect reality as they often include international students who never began their studies in Estonia (in the case of international students, matriculation takes place before the students arrive in the country). A few dropouts have to do with mental health reasons or because of an unsuccessful fit with work activities. The institute as well as the university has a well-organised system of student counselling to prevent dropouts. Support is also provided to students who have dropped out or voluntarily interrupted their studies: they are informed of vacant study places, deadlines for their final defence and options for continuing their studies as external students.

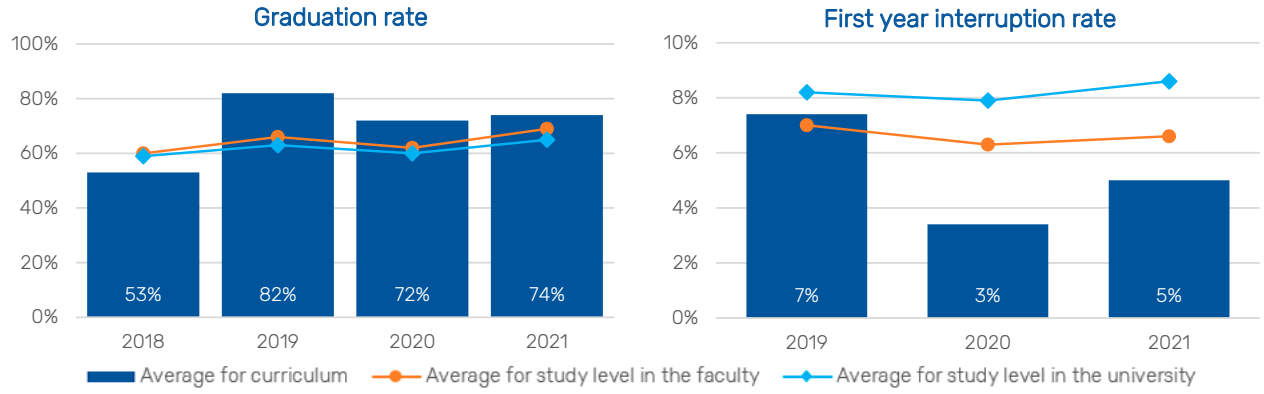

Figure 60. Graduation rate (standard duration plus one year) and the proportion of students who interrupted their studies in their first academic year 2018–2021

Note: There were no such students in 2018

4.2.6. The learning environment and support services support students' studies

Support services are mainly provided by the deputy head for academic affairs and an academic affairs specialist, who students can turn to. There are additional support staff to coordinate students' traineeships, mobility and academic performance. The IRRS programme has one programme director and a programme coordinator, whose role is to take care of extracurricular activities and requests related to theses. The work of programme directors has been acknowledged and recognised by UT legislation by giving them more power and involving them in the decision-making at various levels. The communication and sharing of best practices between programme directors and coordinators are rapidly developing due to centrally-managed working groups and also regular meetings within the Institute.

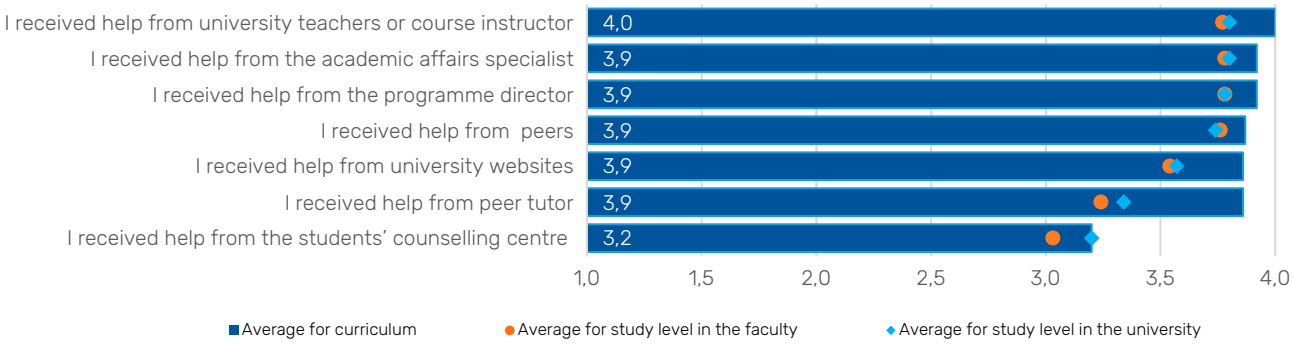

Figure 61. Average rating of university support systems from the 2021 curriculum feedback questionnaire (n = 15)
Scale: 4 = often, 3 = sometimes, 2 = rarely, 1 = never

There is currently one academic affairs specialist serving all students at the master's level, and her work has always been highly regarded by the students. Students are supported in every aspect, regardless of whether their questions are about studying or general issues faced by international students living in Tartu. The institute is not only known as a student-friendly unit, but also for attributing extra value to studies by organising public lectures, events and study visits. The staff contribution to curriculum management and the organisation of the programme is sufficient. Support services are well organised considering the number of students. A certain flexibility also allows staff to assume additional tasks or be reorganised in the event there is an increase in the number of admitted students or there are any unforeseen problems. As mentioned before, the IRRS programme prioritises sustainability to ensure high quality of teaching and learning of IR. Those without sufficient teaching experience, e.g. doctoral students, are constantly trained in teaching methodology at monthly colloquiums so that they can express their research ideas clearly and in a consistent manner, as well as peer-review others. Comprehensive study guides (available on the web page) are created by the institute administration to help students to navigate throughout their studies and perform efficiently.

The courses of the IRRS programme are all taught at the same venue, in the renovated Lossi 36 premises on Toomemägi. All lecture halls and seminar rooms have modern equipment, enabling quality teaching and learning which can use technological solutions if necessary. Unlike in the beginning when the building had problems with airing the rooms (especially when a lecture room became stuffy, but it was extremely cold outside), this is no longer an issue. In addition, an initial problem of having lecture halls which are too small (i.e. room for 100 students maximum) has been alleviated as a result of a decrease in overall number of students and additional possibilities to conduct hybrid or online teaching. The building provides modern conditions for computer use for students, such as a new computer class with modern equipment, stable wireless internet, and laptop sockets in study rooms. All courses are supported by the Moodle environment and are provided support by the Skytte digital task force if needed. Correspondingly, teachers are trained to use Moodle and supported in every aspect when working in Moodle by a member of the support who advises the teachers and administers the contents of Moodle. Students are satisfied with their academic premises and the technical equipment of the lecture rooms. The study environment is good for conducting academic activities, however, being critical, the digital resources are still only sufficient to the minimum extent. The deepening insufficiency in financing academic activities is a matter of concern, given that it may become an obstacle to ensuring effective study arrangements and the quality of academic work.

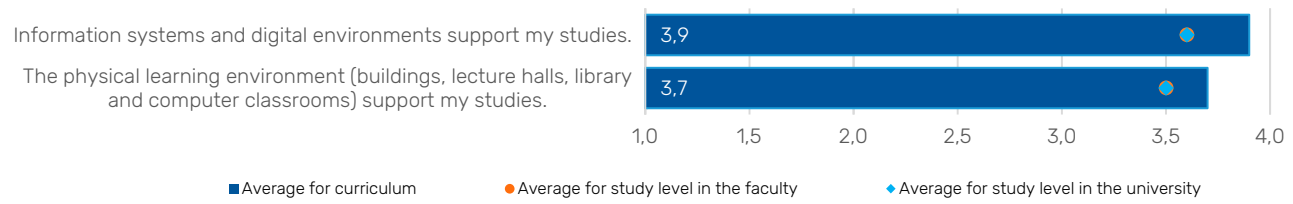

Figure 62. Average evaluation of the learning environment from the 2021 curriculum feedback questionnaire (n = 15)
Scale: 4 = agree, 3 = somewhat agree, 2 = somewhat disagree, 1 = disagree

4.2.7. The organisation of studies, students, lecturers and graduates have achieved recognition

The IRRS programme is well positioned in the educational market. There are no challengers to this programme in Estonia. What is more, it has gained a very good reputation as an added value to the unofficial centre of excellence in Russian and Eurasian Studies. The IRRS programme is known for its strong methodological component and for the application of knowledge-creation in contemporary research, which is often based on a project-based approach (i.e. H2020, Erasmus+ or other R&D projects). One of the quality standards is recognition of the teaching staff by students: for several years in the row the annual best teaching staff awards have been awarded to teaching staff from the IRRS programme (Thomas Linsenmaier, Stefano Braghiroli). Several courses applied for and achieved the HITSA quality mark for online courses (e.g. The History of the Baltic Sea Region), providing an opportunity for remote studies and keeping the general standards for digital teaching and learning at the institute up-to-date. The high interest in the programme can be also explained by the highest rankings in the professional field (PolSci/IR) the UT has ever achieved.

4.3. Summary assessment and action plan

The IRRS programme has been successful in attracting prospective student candidates from all over the world. The programme is also very popular among Estonian nationals who appreciate obtaining a high-quality education within an international setting, while at the same time staying at home. Students are happy about the professional and general-purpose skills they learn to be competitive in the labour market, but they also expect to have more training in digital skills. Overall, the graduates fare well – about half of them have found jobs related to their studied profession and about another half have opted for different career choices other than the IR field. It is possible to conclude that the programme functions well: it follows a logical structure and meets the expectations of students. It pays a lot of attention to the development of various skills and ensures students are supported.

- There are two objectives related to studies:
  1) As there is rising interest in Asia, and due to the existing cooperation links with partner institutions in Taiwan and India, it is planned to facilitate and broaden specialisations in the IRRS programme, while creating an elective module of "Asian Studies" that would entail exchanging and training a number of interested students (max four annually) on the spot during their third and/or fourth semester (Responsible: programme director of IRRS, implementation from the 2023/24 academic year).
  2) Several faculty members related to the IRRS programme have valuable expertise in conflict studies, which can be channelled into a micro-credential programme of "Frozen Conflicts and Their Management Perspectives", and offered to both advanced students and established practitioners, thus establishing closer links between academia and IR epistemic communities (Responsible: programme director of IRRS, implementation from the 2023/24 academic year).
- Another development can be seen in the process of facilitating thesis preparation. Although there are clear guidelines for students, more student support can be provided in terms of selecting research topics, finding supervisors and monitoring the writing progress. Activity: organise quarterly meetings with students to provide research guidance (Responsible: programme coordinator, ongoing/starting from the 2022/23 academic year).
- There are also two objectives related to the development of students' skills:
  1) It is important to expand extracurricular activities where students can apply transferrable skills outside the classroom and get hands-on experience in real work-related situations. Activity: organise activities such as field trips, job shadowing, involvement in the research projects of the institute, cultural and social initiatives, etc. (Responsible: programme coordinator together with marketing specialist, traineeship coordinator, ongoing/starting from the 2022/23 academic year).
  2) It is worth considering how to improve the digital and entrepreneurial skills of students, and to integrate teaching of these skills within the existing courses and modules, i.e. shifting to competence-oriented teaching practices, rather than artificially adding new courses from other faculties. This activity meets the programme mission in terms of providing solid IR training and empowering students to be more competitive in the field of today's complex reality of international relations. Activity: prepare the survey about needs related to digital competences and assess the integration potential into existing courses (Responsible: programme coordinator, in 2022).
- One potential development is raising a new cohort of qualified teachers/trainers in IR with the aim of supporting "locally-grown" academic staff on the basis of doctoral graduates. This goal is especially aimed at Estonian speakers. Activity: promote the programme among Estonian candidates (Responsible: marketing specialist, on-going/starting from the 2022/23 admission campaign), find additional scholarships and create motivational packages (Responsible: institute management and programme director, on-going/starting from the 2022/23 admission campaign).

Members of the programme council

Eiki Berg (IRRS Programme Director, chair of the programme council)
Evelyn Kaldoja (Head of the Foreign News Desk at Postimees; employers' representative)
Heiko Pääbo (Lecturer in Politics of Baltic Region Countries at SVJS, Programme Director of the master's programme in Baltic Sea Region Studies)
Klen Jäärats (Deputy Director for European Union Affairs of the State Chancellery; employers' representative)
Olga Bogdanova (Deputy Head for Academic Affairs at SVJS)
Pearu Pirsko (IRRS student; students' representative)
Piret Ehin (Associate Professor of Comparative Politics at SVJS, Deputy Head for Research)
Stefano Braghiroli (Associate Professor of European Studies at SVJS)
Thomas Michael Linsenmaier (Analyst at SVJS)
Viacheslav Morozov (Professor of European Union and Russian Studies at SVJS)

Programme directors

Eiki Berg, Professor of International Relations Theory at SVJS
Olga Bogdanova, Deputy Head for Academic Affairs at SVJS

5. ROBOTICS AND COMPUTER ENGINEERING

Curriculum information

Level of study:	Master's studies
Faculty:	Faculty of Science and Technology (LT)
Curriculum manager:	Institute of Technology (LTTI)
Language of instruction:	English
Type of study:	Regular study
Place of study:	Tartu
Curriculum volume (ECTS):	120 ECTS
Curriculum code:	136637
Curriculum approved:	28 November 2014
Additional information:	Annex 7

Table 25. Number of students who graduated, were studying and admitted to the master's curriculum in Robotics and Computer Engineering 2017–2021

	2017	2018	2019	2020	2021
Graduates	10	8	16	21	7
Students	40	57	45	36	43
Admitted students*	18	26	15	14	20

** Matriculated students at the start of the academic year who were studying as at 10 November*

5.1. Trends in development of the curriculum

5.1.1. Ensuring the competitiveness of graduates

The strength of the master's curriculum in Robotics and Computer Engineering (RCE) is the training of specialists who, in addition to software development, can also solve technical problems related to equipment. Graduates of the programme will be able to create devices and program the logic that drives them. RCE students can choose to specialise in computer engineering, robotics or space technology.

According to the ICT Special Survey (2021) of the OSKA labour demand monitoring and forecasting system, the ability of Estonian industry to invest in automation and digitalisation is much lower compared to neighbouring countries, and as a result, the need for mechanical, software, manufacturing, process, hardware and electronics engineers is growing in the electronics industry. According to the Estonian Electronics Industry Association, there will be a great need for specialists who have graduated from RCE in the coming years, which is why the desire was expressed in the spring of 2021 for the university to increase the number of students admitted to the curriculum. This is also understandable because in the last decade the state has paid a lot of attention to IT studies, especially in the field of software development, but hardware development is still gaining momentum. At the same time, the number of companies in Estonia that need staff with expertise in hardware development and robotics has clearly increased in recent years. For example, Cleveron, Starship Technologies, Milrem Robotics, SmartStuff and Hedgehog are companies where RCE alumni often work. Approximately 20% of RCE graduates continue on to doctoral studies, which is satisfactory for the sustainability of the specialisation.

5.1.2. Internationalisation and the promotion of Estonian society, language and culture

RCE is a continuation of the bachelor's programme in Computer Engineering at the second level of higher education. As the number of graduates of the bachelor's programme in Computer Engineering was too small (11–16 students graduate per year), RCE was launched in the academic year 2015/16 as a master's programme taught in English. International students help to create an international learning environment, and student exchanges also take place through the Erasmus+ programme.

A mobility window has been integrated into the curriculum, which allows courses studied at foreign universities to be taken into account. This module does not prescribe specific foreign universities or courses, so finding them depends on the student's initiative. The majority of students go abroad as part of the Erasmus+ programme for a traineeship. Once a student has found an interesting new place to study, their choice of destination is supported by concluding an Erasmus+ contract. In recent years, the COVID pandemic has reduced the opportunities for study mobility for students, especially to take part in internships. Students now need to be better informed about mobility opportunities.

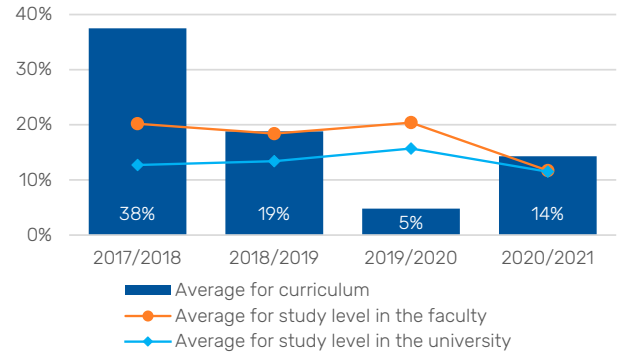

Figure 63. Proportion of students who studied abroad 2017/2018–2020/2021

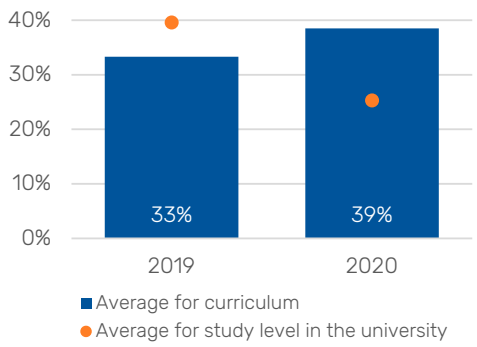

Figure 64. Proportion of international students who graduated in 2019 and 2020 who participated in Estonian language courses during their studies

The curriculum has been cooperating with the French university ECAM LaSalle for a long time. A joint programme will be launched in the 2022/23 academic year as part of which ECAM LaSalle students will also be able to obtain a diploma in Robotics and Computer Engineering.

In order to learn Estonian, a recommended elementary level course in Estonian will be introduced into the curriculum, which according to the university's Statutes of Curriculum will become compulsory for international students from the academic year 2023/24.

A practical training module prepares students for work in Estonia. This involves finding a traineeship for four months on a full-time basis or eight months with a workload of 0.5. In general, international students have managed to find traineeship opportunities in Estonian companies, sometimes even too well because the traineeship has become a job and has started to hinder graduation.

5.1.3. High-level research-based studies

Many courses in the curriculum require the student to implement an independent project, which helps to develop a research-based mindset. Many of the RCE teaching staff are active researchers who offer topics for these projects and final theses from their own field of research and projects. For example, students are involved in the work of research groups for materials science and robotics, as well as those for machine vision and artificial intelligence.

The main concern related to finding thesis topics and supervisors is the shortage of people and the fact that they are overloaded with research activities, business cooperation and teaching. To ensure the quality of supervision, each member of the teaching staff may be responsible for a maximum of 10 students who need supervision. The average number of high-level publications per member of the teaching staff is close to the university average. Although some courses are already taught by specialists from industry, it is important from the point of view of curriculum development to find even more opportunities to involve specialists from Estonian businesses in teaching outside the supervision of graduation theses, especially for specialised courses. In the long run, this will also benefit companies as new potential employees and specialists will be trained in this way.

As RCE is a practical curriculum, applied projects and final theses, and consequently cooperation with companies, play an important role. Several thesis topics have come from Estonian companies (e.g. Hedgehog, SmartStuff, Bercman Technologies, Bolt Technologies, Milrem Robotics, RoboLab Yanu, GScan) and the employees of the companies are also involved as supervisors. Entrepreneurial projects entail the fact that the publication of the thesis is generally prohibited or the defence is closed, or both, in order to protect trade secrets. However, this hinders the spread of knowledge.

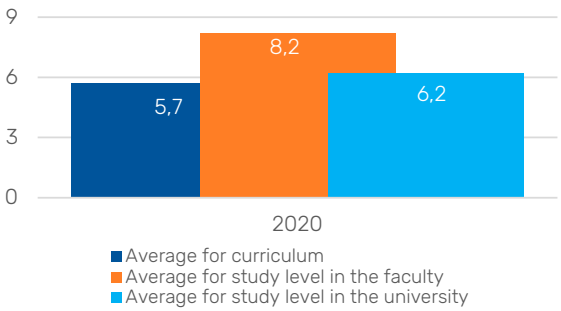

Figure 65. Number of high-level publications per member of the teaching staff in 2020

5.2. Analysis of the curriculum performance

5.2.1. The marketing of the curriculum and its reception has attracted the desired target group to study under the curriculum

Based on the sufficiently high number of applications, it can be assumed that capable and motivated students are being admitted to study under the curriculum. However, assessing the level of applicants is relatively difficult. Until now, the admission criteria have consisted of the average grade of the previous level of study (with a 40% weighting) and a motivation letter (with a 60% weighting). Taking both these into account can result in highly motivated and capable candidates.

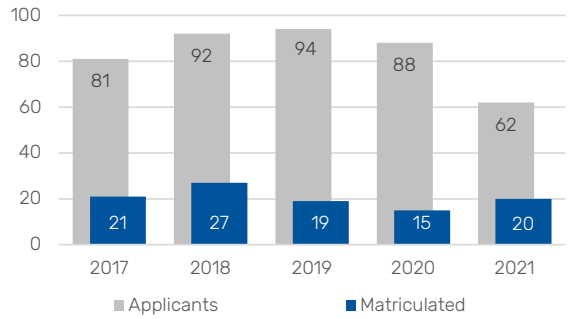

Figure 66. Number of applicants to the curriculum and matriculated students 2017–2021
Source: SAIS

Problems have arisen with candidates from third countries, whose academic transcript results do not necessarily mean that the candidate has sufficient learning skills. Also, many motivation letters do not meet the conditions set for them in terms of their content. To reduce the admission of candidates who have gaps in their knowledge from their previous level of study, there are plans to change the admission requirements and add an entrance test checking knowledge of the prerequisite courses (programming, mathematics, physics).

5.2.2. The curriculum has been thoughtfully structured

Based on the results of the curriculum feedback questionnaire (13 respondents in 2020, 7 respondents in 2021), RCE students are satisfied or mostly satisfied (100% in 2020, 86% in 2021) with the choice of modules and courses in the curriculum (the average for the faculty and the university is 85-88%). Students have quite a lot of freedom of choice within the curriculum, and can essentially create an individual curriculum if they are interested in doing so, e.g. to focus on machine learning and artificial intelligence.

The compulsory modules of the curriculum are the basic and seminar modules. Passing the basic module ensures that students achieve the necessary learning outcomes for entering the labour market and have the basic knowledge needed to choose a specialisation module. The role of the seminar module is to train students' self-expression skills, and also to provide initial field-related practical work experience before entering the labour market. In the interests of clarity in the choice of specialisation and for marketing the curriculum, three separate specialisation modules were created: robotics, computer engineering and space technology. Although students can choose courses from across the specialisation modules, not all students may understand this. It is worth considering combining all the specialisation courses into a single elective module, so that students who are clear about their own goals can put together a suitable programme without any problems.

The fact highlighted in the feedback that students expect to study more courses related to mechanics also needs to be seriously addressed. It is necessary to create more courses related to practical electronics and find suitable staff to teach them.

5.2.3. Teaching and assessment support learning

The vast majority, if not all of the curriculum's courses are based on the principle inherent in technical sciences when creating a learning experience: learning takes place by doing. Each course therefore contains a high proportion of practical work (which sometimes also arises from industry or research problems). As a rule, practical study is implemented either as a weekly practical session or as a multi-week technical project, or both (e.g. the courses "Robotics II", "Competition Robot Project" and "Space Technology Project"). Oral or written defence is often used in the assessment of practical work, where the learner is expected to explain both the solution and why it is appropriate. Such an approach cultivates both the acquisition of practical skills as well as the pluralism of solutions.

Until the beginning of the pandemic in the spring of 2020, the results of the three aggregate factors in the course feedback questionnaire (teaching, learner engagement and general assessment of the course) were similar to the faculty average and slightly lower than the university average. In the last three semesters (from the spring of 2020 to the spring of 2021), the average assessment of the course teaching and learner engagement have decreased slightly (from 3.5 to 3.4 on a 4-point scale). Learner engagement was rated lower by students on average in the spring of 2021 (3.2 points), when the university was in distance learning for the whole semester. Remaining in distance learning had a more severe effect on international students, as an analysis prepared by the university has also shown. At the university as a whole, the feedback given on courses remained stable during this period, but if we look only at the feedback given on courses taught in English, there is also a small fall across the university in the spring of 2021.

The curriculum feedback questionnaire shows that students are satisfied with the order of the courses and understand why these courses are included in the curriculum (all students agreed with the relevant statements). Nearly 90% of students agree that they are evaluated in the courses on what they have been taught. They are most critical about the issue of receiving feedback – almost 80% agree with the statement that "feedback helped me to understand where I need to further develop my knowledge or skills" (aggregate results from course feedback). Approximately 85% of respondents agree with the rest of the statements about teaching, which describe how the course supports learning (structure, diversity, interactivity).

5.2.4. The curriculum supports the development of competencies necessary for graduates

Based on the results of the course feedback questionnaire, when evaluating the development of their own competencies, students are most satisfied with their ability to apply theoretical knowledge to create and analyse everyday practical applications, assess the reliability of information, justify their assessments with facts and evidence, avoid plagiarism, and understand research methods related to their specialisation.

Surprisingly, they feel less strongly that their specialised digital skills and collaboration skills have developed, despite the fact that the curriculum includes several courses that involve teamwork. There is a need for more research into which digital competences are felt to be lacking in order to pay more attention to their development. The issue is probably something to do with the fact that expectations are higher than in many other curricula, or that some students may already have such strong digital competencies that they do not feel that they are making significant progress.

General skills which need further development include the skills of analysis and synthesis, the ability to find different ways of implementing one's ideas, understanding things from the point of view of another discipline, and systematic theoretical positions in one's field. Both career planning skills and study skills also need to be developed.

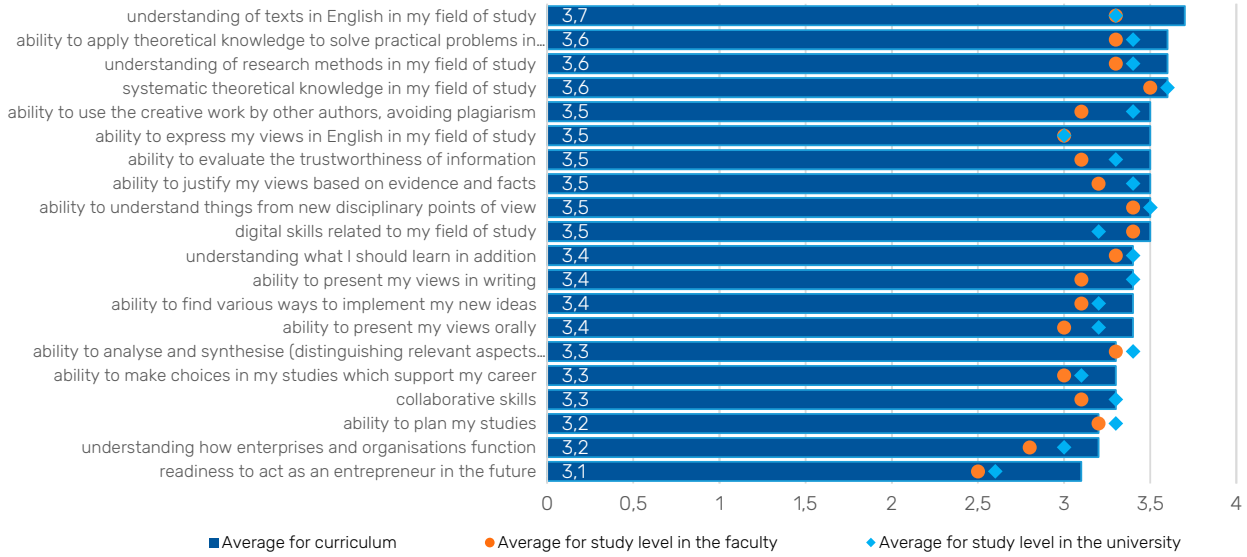

Figure 67. Students' assessment of the development of their competencies in the 2020 and 2021 curriculum feedback questionnaire (n = 20)

Scale: 4 = developed a lot, 3 = developed to some extent, 2 = did not develop, 1 = became worse

5.2.5. Students successfully reach graduation

The student dropout rate is consistently 10-12%, which is the equivalent of 2-3 students in absolute terms. The main reasons are overestimation of their own financial capacity (in student-funded places), overestimation of their own abilities, especially among international students and in programming, premature employment, or overestimation of their capacity to work in parallel with studies. While in general international students are more motivated to study and stick to study deadlines, on getting a job at an Estonian company their motivation changes in a similar way to that of local students, i.e. their studies start to be extended. However, it is commendable that even in this case, quite often the student still tries to get their master's degree, often as an external student. The graduation rate can be assessed as quite good, i.e. it is comparable or in some cases even exceeds the equivalent indicators for the faculty and the university.

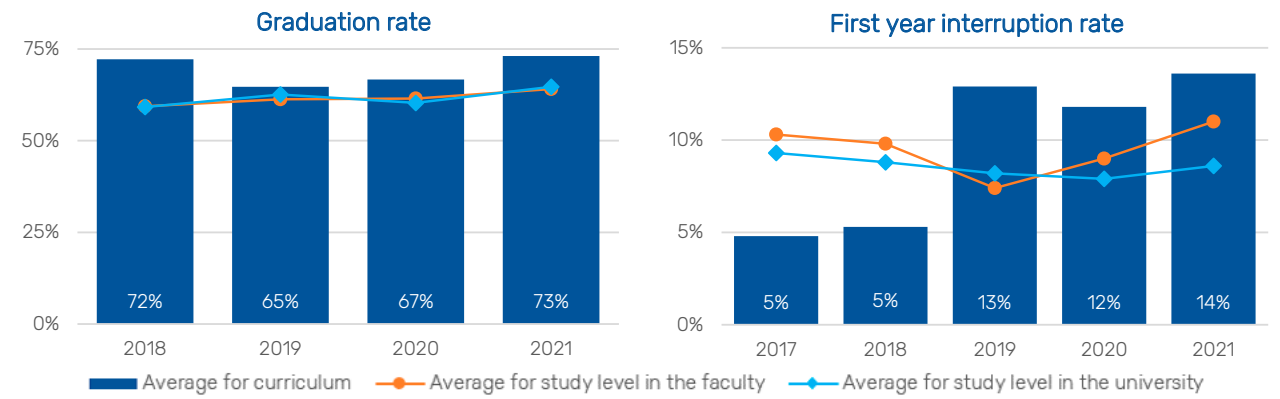

Figure 68. Graduation rate (standard duration plus one year) and the proportion of students who interrupted their studies in their first academic year 2017–2021

5.2.6. The learning environment and support services support students' studies

Students are relatively satisfied with the support structure and study conditions, although there is a notable lack of space at the Institute of Technology. They are also satisfied with the e-learning environments. E-learning is a necessary supporting factor, but both students and teaching staff definitely do not want permanent distance learning.

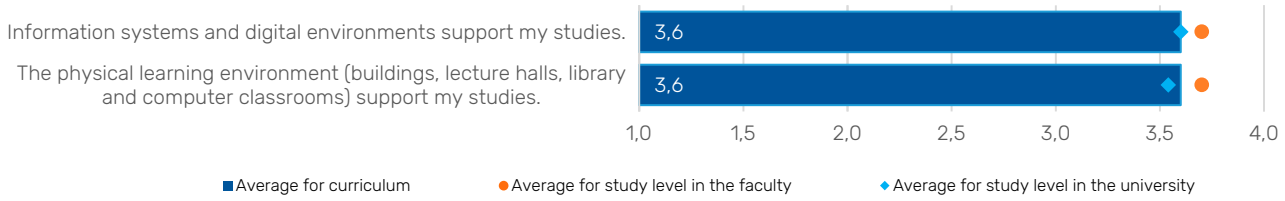

Figure 69. Average assessment of the learning environment based on the 2021 curriculum feedback questionnaire (n = 7)
Scale: 4 = agree, 3 = somewhat agree, 2 = somewhat disagree, 1 = disagree

Students ask the programme director and teaching staff for help the most and are also very satisfied with the advice they receive. They are also satisfied with the tutors. However, the support received from fellow students is rated lower than the university and faculty average. At present, it is not possible to say why this difference exists. Also, no RCE student has sought help from the university's Counselling Centre.

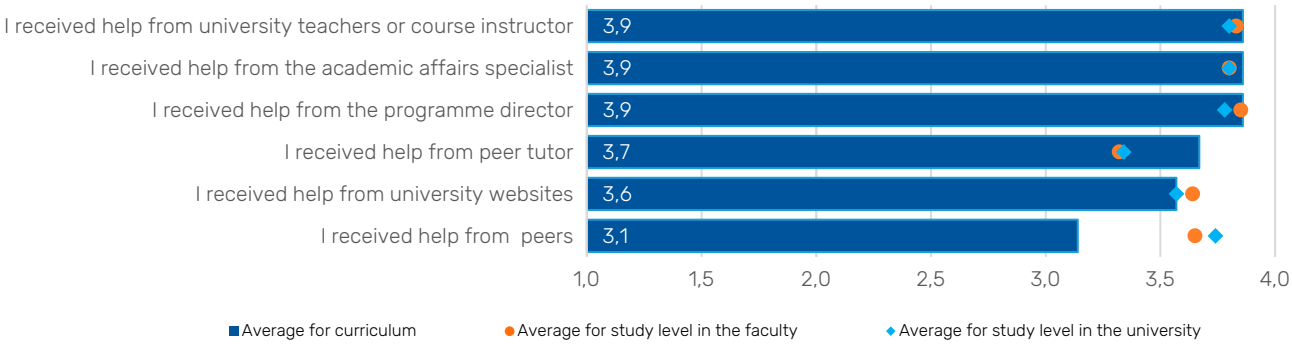

Figure 70. Average assessment of university support systems based on the 2021 curriculum feedback questionnaire (n = 7)
Scale: 4 = often, 3 = sometimes, 2 = rarely, 1 = never

5.2.7. The organisation of studies, students, lecturers and graduates have achieved recognition

Every year, the student body of the Faculty of Science and Technology collects feedback from students on the teaching staff and names the best teaching staff members of the year. Students have awarded the latter title to several members of the curriculum's teaching staff: Karl Kruusamäe (2021, 2019), Janno Jõgeva (2021, 2020), Veiko Vunder (2021), Artur Abels (2019). In 2018, the programme director Heiki Kasemägi won the UT Programme Director of the Year award.

5.3. Action plan

The main strengths of the curriculum are its suitability to the growing needs of the labour market and its close connection with business, including long traineeships. A strength of the curriculum is also the opportunity to apply theoretical knowledge in a number of practical projects. The COVID period was an obstacle in that respect, so students' satisfaction with teaching fell slightly.

- The main development priority for the curriculum in the coming years is to change the admission requirements in order to guarantee that the entrants have sufficient knowledge of the basic prerequisite courses – mathematics, physics and programming. To that end, there are plans to use an entrance test for the intake of the 2022/23 academic year, which will include questions and tasks on the above-mentioned areas (responsibility of Heiki Kasemägi).
- Supplement the curriculum so that Estonian becomes compulsory for international students from the academic year 2023/24 (responsibility of Heiki Kasemägi).
- In cooperation with Tallinn University of Technology, find opportunities for students to study additional courses in mechanics and electronics as visiting students or add these to the curriculum as electives (Heiki Kasemägi in cooperation with the Vice Dean for Academic Affairs).
- In cooperation with companies, implement learning methods where each student also has a mentor from industry and part of the learning takes place in the company (the leader of the activity is Karl Kruusamäe).

Members of the programme council

Heiki Kasemägi (RCE Programme Director, chair of the programme council)
Erik Ilbis (graduate)
Alvo Aabloo (Professor of Polymeric Materials, Materials Science)
Varmo Vene (Professor of Programming Languages Semantics, Vice Dean for Academic Affairs at LT)
Kalev Tarkpea (Head of the Department of Physics Education)
Urmas Tamm (AS Canon Overall)
Toomas Plank (Director of the Institute of Physics)
Indrek Rebane (member of the management board of Hedgehog OÜ)
Karl Kruusamäe (Associate Professor of Robotics Engineering)
Kaarel Rhede (student)
Mona Küüts (student)

Programme director

Heiki Kasemägi, Associate Professor of Materials Technology at LTTI

6. TRANSLATION AND INTERPRETING STUDIES

Curriculum information

Level of study:	Master's studies
Faculty:	Faculty of Arts and Humanities (HV)
Curriculum manager:	College of Foreign Languages and Cultures (HVLC)
Language of instruction:	Estonian
Type of study:	Regular study
Place of study:	Tartu
Curriculum volume (ECTS):	120 ECTS
Curriculum code:	101064
Curriculum approved:	27 November 2009
Additional information:	Annex 8

Table 26. Number of students who graduated, were studying and admitted to the Translation and Interpreting Studies master's curriculum 2017–2021

	2017	2018	2019	2020	2021
Graduates	22	18	12	10	11
Students	65	51	51	40	45
Admitted students*	23	11	19	14	16

** Matriculated students at the start of the academic year who were studying as at 10 November*

6.1. Trends in development of the curriculum

6.1.1. Ensuring the competitiveness of graduates

The development of the Translation and Interpreting Studies curriculum is based on the strategic plan objectives and mission of both the University of Tartu and the Faculty of Arts and Humanities to ensure the development of Estonian culture and language. The goal is to prepare students for work as translation and language specialists, and to ensure the competitiveness of graduates. Close cooperation with translation agencies and European Union institutions takes place as part of the curriculum. The Department of Translation and Interpretation Studies at the UT College of Foreign Languages and Cultures has belonged to the European Master's in Translation (EMT) network since 2019, which means a commitment to offer the best translation education and fulfil the agreed quality criteria.

Due to the strong development of translation and digital technology in recent years, the professional profile of a translator is also changing, which is why the teaching of both translation assistance programs and the editing of machine translations in the curriculum has been increased. These skills can also be acquired through continuing education. The curriculum offers translators who are already working the opportunity to improve their knowledge and skills in language technology, terminology databases and the translation of European Union texts.

Employers attach great importance to competency in translation technology and the readiness of translators to continuously develop their skills and knowledge in this area. According to employers, the competitiveness of curriculum graduates is particularly high in the ability to translate different types of texts and in competency in translation technology.

A study published in 2019 using the labour market monitoring and forecasting system OSKA found that there are more people learning to be language specialists in Estonia than jobs, but feedback from university graduates and translation agencies has not confirmed this. According to data from the graduate questionnaire, 90% of respondents' jobs were related to the speciality they studied. Almost half the respondents were already working in their specialist field during

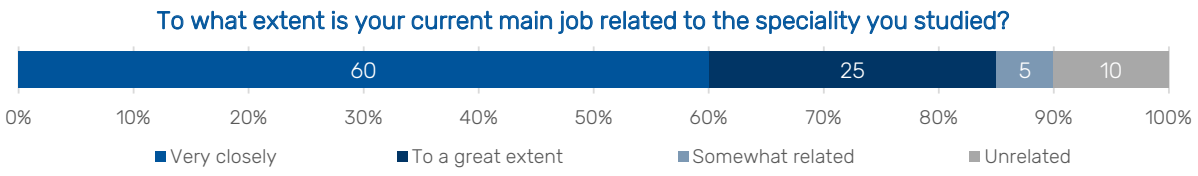

Figure 71. Relevance of jobs of graduates of the Translation and Interpreting Studies curriculum between 2016–2018 to their studied specialisation, as at 2019 (n = 20)
Source: MoER

their studies, and 41% of respondents found such work within two months of graduation. Employers have confirmed that there is still a great need for good translators and language specialists.

Thanks to the encouraging example of alumni and professional experts, students have a better understanding of the need to develop general skills, including the importance of recognising the need for self-improvement and developing an attitude which is conducive to further learning.

6.1.2. Internationalisation and the promotion of Estonian society, language and culture

International cooperation takes place in both research and teaching. The three working groups of the EMT network deal with translation technology, competency in translation, and research and teaching of the translator's working languages. Teaching staff are also participating in the international LITHME (Language in the Human-Machine Era) network's working group researching the work and workers of the language field.

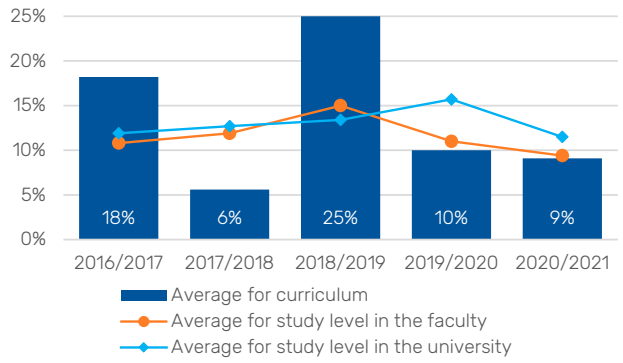

Figure 72. Proportion of students who studied abroad 2016/2017–2020/2021

Students participate in learning mobility as part of the Erasmus+ programme, mostly at KU Leuven and at the Germersheim campus at the University of Mainz. In order to facilitate the mobility of students, a mobility window has been included in the curriculum, which allows studies abroad to be considered as part of studies at the UT. Several students of the curriculum have successfully carried out internships at EU institutions and have found permanent employment abroad.

Prof. Luc van Doorslaer, who has been working at the UT since 2018, has helped to significantly increase the international visibility of the curriculum and the level of research. Thanks to his leadership, the department is part of the Cultural Transfer Research group of the U4Society network. In recent years, several international seminars and conferences have taken place in the department or are due to do so: Translating Images of Canada (2019), Translation as Transfer of Cultural Images (2021), Museums as Spaces of Cultural Translation and Transfer (May 2022).

In addition to international lecturers, there are also representatives of different nationalities among the students of the curriculum, which creates a diverse and multicultural academic environment. In addition to internationalisation, the department considers it important to preserve and develop Estonian language and culture. In addition to work on terminology carried out in translation seminars, Estonian terminology has been developed from 2018 through work on translating Estonian-Russian-Estonian legal terminology and from 2021 through the translation of the English-Estonian terminology handbook "Handbook of Translation Studies" into Estonian. Several students have compiled terminological glossaries for their master's theses or have carried out comparative linguistic research.

6.1.3. High-level research-based studies

Although the curriculum of Translation and Interpreting Studies has a practical output, the teaching of translation is based on a scholarly way of thinking. 51% of the HVLC's 69 academic staff have a doctoral degree, and the share of international lecturers and researchers is 19%. When recruiting and evaluating academic staff, it is ensured that teaching staff members are up to date with the latest trends in translation studies and are guided by both professional and teaching-related research results. The research work of the teaching staff covers different areas of translation studies (translation policy, sociology of translation, imagology, translation as cultural transmission, linguistics, terminology, editing of machine translation), but depending on the position, not all staff members have extensive research responsibilities.

Different courses support the development of scholarly thinking in students, e.g. by discussing conflicting theoretical approaches to translation, the student's critical thinking is developed. Students are encouraged and supervised to work with academic literature and to actively participate in research. Students have access to many journals and databases related to translation studies through the UT computer network, but many high-level journals, such as Target, are unfortunately not yet available in the UT library. All students gain research experience by writing a master's thesis, and many students participate in the research projects of the department's teaching staff. The supervisors of the master's theses are teaching staff from different departments of the College of Foreign Languages and Cultures. In some cases, it has been possible to involve specialists from other research institutions, such as the Institute of the Estonian Language and Tallinn University, to teach courses and supervise master's theses. Lectures by visiting lecturers in the spring and autumn schools of the UT Master's School of Linguistics and Translation Studies have become a tradition. Thanks to Erasmus+ exchanges of teaching staff and other collaborative projects, students have been taught by professors and translation professionals from different European countries. Thanks to web conferencing, students have been able to participate more in international research conferences and reflect on the presentations they have heard in seminars.

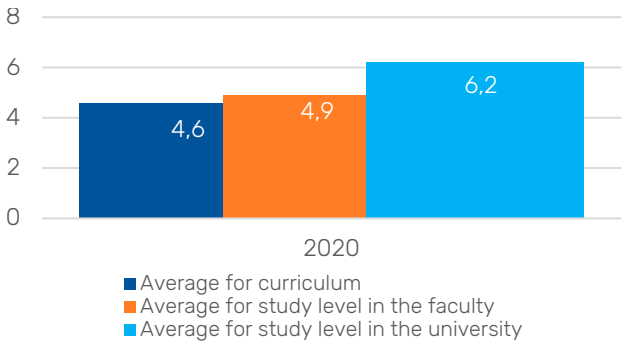

Figure 73. Number of high-level publications per teaching staff member in 2020

The challenge is to ensure the ongoing availability of the highly qualified academic staff needed to offer the curriculum. Until 2022 it was not possible to specialise in translation studies as part of the doctoral studies curriculum at the UT (that specialisation was established in 2022 as part of the new doctoral study programme); research related to translation could only be done as part of other doctoral study specialisations. The salaries offered by the university are not competitive relative to private sector salaries and it is very difficult to motivate talented young people to pursue an academic career. For this reason, a competition in 2021 for the position of junior lecturer in translation studies also failed.

6.2. Analysis of the curriculum performance

6.2.1. The marketing of the curriculum and its reception has attracted the desired target group to study under the curriculum

The Translation and Interpreting Studies curriculum has one of the highest numbers of admitted students of the master's degree programmes at the Faculty of Arts and Humanities. While in 2013–2017 an average of 25 students per year were matriculated to the curriculum, since 2018 there has been a noticeable decrease in the number of applicants for the curriculum as well as in the number of applicants who have met the admission requirements.

This may be due to a change in the professional profile of translators, a decline in the reputation of the translation profession and fears amongst non-translation specialists that the development of translation technology, and in particular machine translation, could lead to the disappearance of translation as a profession. Another reason is the suspension of admission to the interpretation specialisation from 2017. There are currently discussions in the college about resuming the teaching of interpretation as a specialisation. A third reason that can be mentioned is the decline in the number of students specialising in French and, in particular, German. This is due to a decrease in the number of German studies students in bachelor's studies, as well as a general decline in German language teaching in upper secondary schools.

Despite the decrease in the number of students applying for the curriculum, the student places have for the most part still been filled. Due to the small number of applicants, it is not always possible to screen the most capable and motivated students in the entrance examination, which is why several students have dropped out soon after receiving the admission decision.

In recent years, there has been a change in the profile of students: more and more applicants are entering the translation studies curriculum at a more mature age. In 2021, 29% of students in the curriculum are 30 years of age or older. Many master's students have long-term translation experience (e.g. in the field of fiction) and would like to develop their skills in translating commercial texts. Some master's students have worked in another field for many years, but want to make a career change and are looking for a field that allows them to work flexibly. Master's students with different backgrounds and experiences usually enrich the study environment and make studies more diverse.

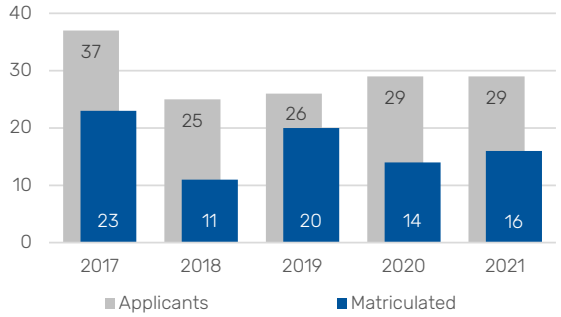

Figure 74. Number of applicants to the curriculum and matriculated students 2017–2021
Source: SAIS

Further marketing of the curriculum must take even more account of the changing professional profile of the translator and also show younger candidates more clearly the career opportunities that await them as translation and language specialists. Based on this, the visibility of the curriculum on social media has been increased and the website for the curriculum will be thoroughly updated by the admission period for 2022. To inspire people to apply, a so-called alumni corner has been created on the curriculum website where alumni of the programme describe their careers after completing their translation studies.

6.2.2. The curriculum has been thoughtfully structured

The curriculum is being continuously developed, taking into account the requirements of the Statutes of Curriculum, the criteria for joining the EMT network, developments in the translation market, as well as any feedback from students of the curriculum. Based on the Statutes of Curriculum, the curriculum contains all the prescribed components, including courses taught in foreign languages, a practical training module, Estonian language courses, entrepreneurship studies

and a mobility window. The curriculum is primarily taught in Estonian, but English, German, French and Russian are also actively used in translation seminars. Some translation studies lectures and seminars taught by international professors in the faculty are conducted in English. All students must complete a six-week practical training at a translation agency or other institution. In order to develop students' knowledge of entrepreneurship and to form an entrepreneurial attitude, a course introducing small business has been added to the curriculum.

In 2020, a mobility window was added to the curriculum so that students participating in learning mobility could transfer courses completed abroad to the curriculum. Before joining the EMT network, the volume of translation technology courses in the curriculum increased and a course introducing the translation market and services was added. Taking the wishes of students into account, the volume of several courses has been increased to 6 ECTS from the previous 3 ECTS to avoid fragmentation of knowledge and to enable the student to engage in the course in-depth during the semester. Whereas previously 6 ECTS courses in the curriculum were often two-part and took place over two semesters, now most such courses are completed in a single semester. This change has greatly facilitated the completion of the curriculum for students in learning mobility or on academic leave.

The elective modules in the master's programme give students the freedom to design their own learning path. Students can choose the order in which they take compulsory and elective courses, as most courses are taught each year. The curriculum is interdisciplinary and includes courses taught at other institutes (e.g. courses related to economics and law). Lesson plans are designed to ensure that courses are in a logical order (introductory courses before more specialised courses) and are interlinked. As the number of students in the curriculum is not very large, the number of respondents to the curriculum feedback questionnaire is too small to be able to draw substantive conclusions from the quantitative results (10 students answered the curriculum questionnaire in 2020, and 7 students did so in 2021).

In 2021, the few free-text comments expressed both positive and negative attitudes. Practical translation seminars in different language groups were highlighted as positive. According to the respondents, this provides good preparation for entering the translation market. The wide range of courses supporting translation was also highlighted. A shortcoming that was mentioned was that more digital competences, computer skills and foreign languages could be taught at the university.

The teaching of digital competencies has received increasing attention in recent years. In the in 2020/21 academic year, the HVLC participated in a national project aimed at developing digital competences related to foreign languages. Participation in the project increased the readiness of teaching staff to use digital solutions. The Translation and Interpreting Studies curriculum includes a number of courses in which students can develop digital skills. In addition, students can choose courses from the digital humanities module from the Faculty of Arts and Humanities. This needs to be brought to the attention of students more clearly than before.

There are no separate foreign language courses in the Translation and Interpreting Studies curriculum. Entrants to the curriculum are required to have a high level of proficiency in their first foreign language (at least C1 level in English, French, German or Russian) and a B2 level of proficiency in a second foreign language. In translation seminars, there is a strong emphasis on learning terminology in both their mother tongue and foreign languages, which is why students are encouraged to continue working with foreign languages. It is possible to study more than 20 different foreign languages at the college. As some courses in the curriculum are taught in English, certain students have found it difficult to follow English courses. The requirement for proficiency in English is given in the description of the curriculum, but this must be made clearer for applicants.

Several students have expressed a desire for interpretation courses. As interpretation is not currently taught as a specialisation, students can only take an introductory course in it. There is also a course on community interpreting available.

According to the teaching staff, the curriculum is coherent, the courses are in a logical order and relate well to each other. Students from other disciplines have also taken part in the translation courses, but this has not led to overcrowding of the groups.

6.2.3. Teaching and assessment support learning

As in the university as a whole, the curriculum of Translation and Interpreting Studies emphasises the importance of learner-centric teaching and the involvement of students in the learning process, both in the studies themselves as well as during evaluation and feedback. The department's teaching staff members have improved their skills in the field of active learning methods and have also participated in other training events that develop teaching skills. Two members of the department's teaching staff have received the UT Scholarship of Teaching and Learning. Teachers' aspirations are

also reflected in students' satisfaction with the teaching, which is higher than the average for the Faculty of Arts and Humanities and for the university as a whole. Although student feedback on the courses offered has been mostly positive over the years, changes have been introduced based on the feedback received. For example, in several translation seminars, summary assessment has been replaced by formative assessment in order to take into account students' progress and development in the learning process and to increase their responsibility. The teaching staff consider it very important to give feedback on the students' work, and the students themselves are also involved in this process. Most of the courses related to translation are provided with high-quality e-support, which made it possible to conduct distance learning in the conditions of a pandemic without a significant decrease in the quality of learning and teaching.

In addition to teaching specialist knowledge, attention is also paid to the development of general skills. Students are given the opportunity to develop oral and written self-expression skills in seminars, to practice cooperation and debating skills during group work, and to improve their digital literacy by doing translation exercises. Although students are very satisfied with how the courses are taught, the feedback from students in 2021 shows that not all students understand why these specific courses are included in the curriculum. Verbal feedback from students has shown that they are more dissatisfied with courses which have theoretical and more demanding content, as well as with the courses taught in English. From now on, the plan is to advise students on the choice of courses even better and to explain how the courses in the curriculum help them to fulfil the curriculum's learning objectives.

Last year, the content and wording of the learning objectives and outcomes for the translation specialisation were improved and supplemented so that they could be better understood by students. We would like to pay more attention to the fact that the objectives and outputs of each course could be discussed with the students at the beginning of the course. Given the changing profile of students and the increasing number of students who work alongside their studies, it is also necessary to consider the need to change how studies are organised. As it stands, most courses are three to four days a week in the first academic year and one or two days a week in the second year. In the future, it will be necessary to try to organise face-to-face teaching even more compactly, increasing the volume of distance learning (e-learning) and students' independent work if necessary and possible. Students can also apply for their previous studies and work experience to be taken into account towards the completion of the curriculum.

6.2.4. The curriculum supports the development of competencies necessary for graduates

Based on interviews and the results of the alumni feedback survey, alumni of the curriculum are generally satisfied with the knowledge and skills acquired in the curriculum. In 2021, the final-year students were more critical in assessing the development of their competencies in the curriculum feedback questionnaire than the students who graduated in 2020 (90% of graduates answered the questionnaire in 2020 and 63% in 2021).

Figure 75. Students' assessment of the development of their competencies in the 2020 and 2021 curriculum feedback questionnaire (n = 16)
Scale: 4 = developed a lot, 3 = developed to some extent, 2 = did not develop, 1 = became worse

According to survey respondents in 2020, the following competencies developed the most: the ability to understand things from new disciplinary points of view; specialised theoretical knowledge; understanding of field-specific research methods; understanding of specialised texts in foreign languages and digital skills related to their field of study. According to respondents in 2021, their understanding of foreign-language specialist texts developed the most, followed by professional theoretical knowledge, digital skills related to their field and the ability to apply theoretical knowledge to solve practical problems. The students' assessments also differed in terms of the competencies which developed

the least. The last place among the respondents of both years was the readiness to be an entrepreneur in the future. This may be due to two factors: either the students did not choose courses related to entrepreneurship, or they did choose them but found that they were not ready to become an entrepreneur as a result of their studies. What is a cause for concern is that the 2021 graduates assessed that they developed several other competencies either less or not at all compared to students of other master's programmes, such as an understanding of what they still need to learn, collaboration skills, the ability to present their views orally, and the ability to put their ideas into practice. At the same time, the feedback data shows that the overall average was brought down by the opinion of one or two respondents, which is why no general conclusions can be drawn from a single year's responses. Over the two-year period, students mentioned different competencies that they could or could not develop enough during their studies. This testifies to the varied needs and abilities of students in developing their skills and knowledge. There is a desire to pay even more attention to the development of transferable skills in the future.

6.2.5. Students successfully reach graduation

There is concern about the high dropout rate in the Translation and Interpreting Studies curriculum, which is higher than the faculty or university average. Between 2018 and 2020, 35 students interrupted their studies, 10 in the first year and 25 in the second year. The majority of first-year students (6 students) interrupted their studies at their own request, either for family or other personal reasons, one student dropped out due to incompatibility with the specialisation, one due to lack of progress, and two students changed their curriculum, continuing their studies at the UT in a different curriculum. All the students who interrupted their studies were talked to and their options for continuing their studies were discussed, but all the students were sure about their decision. As the reasons for dropping out in the first year have mostly been private problems, it is difficult for the university to offer any support.

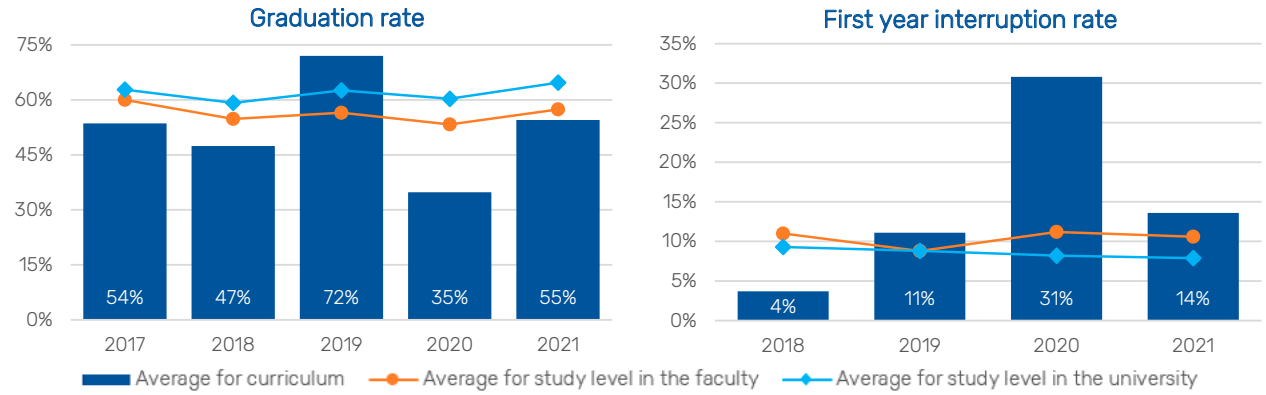

Figure 76. Graduation rate (standard duration plus one year) and the proportion of students who interrupted their studies in their first academic year 2017–2021

Second-year students mostly dropped out after the end date of their studies (23 students) and only two at their own request. The lack of motivation of second-year students to complete their studies is of great concern. Almost all those who drop out in the second year have used all the possibilities allowed by law to extend their studies, and the curriculum has otherwise been finished, but the master's thesis has not been completed. In most cases, students have already found a suitable job during their studies and lack the motivation to write a master's thesis. The problem is exacerbated by the fact that a master's degree is not valued in society, either in material terms or when applying for positions. A survey carried out in 2020 of graduates from the years 2016-2018 found that 47% of respondents were already in professional employment during their studies, but only 19% of respondents had a salary increase after obtaining their master's degree. In conversations with representatives of translation agencies, it was also emphasised that the competency of a translator is more important than a master's degree. Translation agencies therefore also employ a large number of former students who have not completed their studies. All students who have not yet defended their thesis have been contacted and solutions have been proposed how they can continue their studies. In most cases, these efforts have not borne fruit. In order to facilitate the successful graduation of students, the content of the master's seminar course was changed in 2018 and the volume of the course "Introduction to Translation Studies" was increased in 2021 to provide more support for students to write their thesis. Meetings with supervisors have also been made more regular to support students.

6.2.6. The learning environment and support services support students' studies

Student satisfaction with the learning environment and support services is very good. Student feedback shows that the university's information systems and digital environments greatly support their learning. In recent years, the use of different digital learning environments has grown significantly and both students and teaching staff have adapted well to them. Virtually all translation courses have Moodle support and also use other digital environments (Big Blue Button, MS Teams, OneDrive, Zoom, etc.). The satisfaction of translation students with the physical learning environment is

slightly lower, but a change for the better should happen over the coming years. Renovation was started on the college's study building at Lossi 3 in the 2020/21 academic year and all teaching activities were moved for two years to temporary premises at J. Liivi 4. The premises at Lossi 3 have needed modernisation for a long time as they no longer met modern working and study conditions. The current temporary premises only have the essentials needed to conduct studies, and the conditions are poor relative to the university's new study buildings. Students miss the college library, which is temporarily operating from a very small area and which doesn't have any places for students to work. In 2022, the renovation of the Lossi 3 study building will be completed and the physical learning environment will also improve.

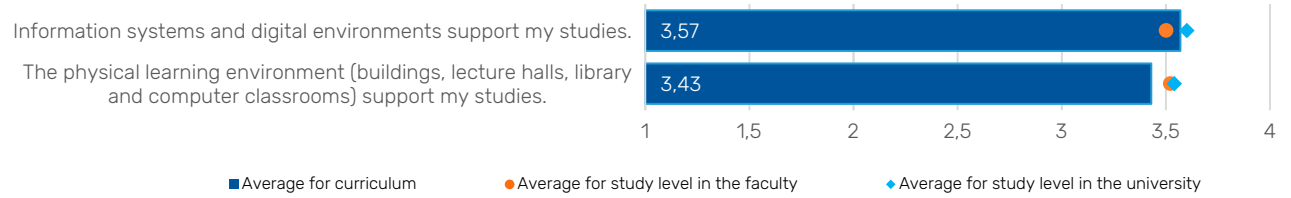

Figure 77. Average assessment of the organisation of studies and the learning environment based on the 2021 curriculum feedback survey (n = 7)

Scale: 4 = agree, 3 = somewhat agree, 2 = somewhat disagree, 1 = disagree

Feedback from students shows that they are very satisfied with the university's support system. The help and support of academic affairs specialists, teaching staff and the programme director are also highly valued. At the very beginning of their studies, students are told who to contact with which questions and are also given the relevant contact details.

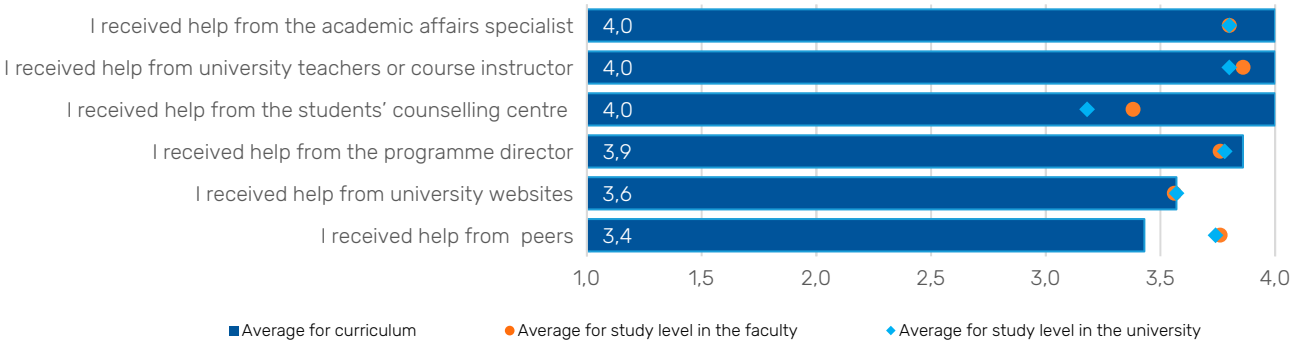

Figure 78. Average assessment of university support systems based on the 2021 curriculum feedback survey (n = 7)

Scale: 4 = often, 3 = sometimes, 2 = rarely, 1 = never

6.2.7. The organisation of studies, students, lecturers and graduates have achieved recognition

The staff of the Translation and Interpreting Studies curriculum, as well as the organisation of studies, have received praise and recognition at various levels. The greatest recognition for the teaching staff was joining the European Master's in Translation network. As joining the network is only possible on the basis of strict selection criteria, membership provides some assurance on the quality of the curriculum.

In 2016, the programme director of the Translation and Interpreting Studies curriculum was awarded the title of the best programme director at the UT. Two of the department's teaching staff members have received the UT Scholarship of Teaching and Learning (Terje Loogus in 2018 and Reelika Saar in 2021). As part of the Scholarship of Teaching and Learning, UT teaching staff members study their teaching on an evidence-based basis and share their experience with colleagues both at the university and at international conferences. The aim is to find new ideas for the development of teaching and to study their feasibility and possible positive impact on the quality of teaching in the academic unit and the university as a whole.

Several of the department's teaching staff have received professional awards: Sirje Kupp-Sazonov received the silver award of the journal Akadeemia for research articles in 2018 and 2020, and Terje Loogus has won the Republic of Austria's Translation Prize for translating fiction twice (in 2012 and 2016). Luc van Doorslaer was elected vice president of the European Society of Translation Studies in 2016 and is a member of numerous editorial and other boards.

6.3. Action plan

- Maintain EMT membership in 2024: bring the curriculum and learning outcomes of the courses into alignment with the competencies specified in the EMT competence framework; submit application documents in the autumn of 2023; responsible: programme director of the curriculum.
- Increase the visibility of the curriculum and find motivated candidates for admission: organise meetings with alumni and notable translators, to take place from the spring semester of 2022; organise an information event introducing the specialisation aimed at bachelor's students; update the curriculum website by the end of the 2021/22 academic year; make regular posts (once a month) on the college's social media platform; publish an article introducing the activities of the curriculum on the EMT blog in 2022. The programme director of the curriculum is responsible for these activities.
- Reduce the student dropout rate: in order to better ascertain what motivates students, change the questions in the entrance examination from the 2022 admission (the chair of the admission committee is responsible). As the majority of students who drop out of their studies in the second year do so due to an unfinished master's thesis, change the content of individual supervision meetings from the spring semester of 2022 and introduce supervision diaries, modelled on those used in doctoral studies, in which the action plan for the semester, agreed tasks and the content of meetings are set out. Writing down assignments and completing a diary enables students to better manage their activities and time, and increases student autonomy. The programme director of the curriculum is responsible for these activities.
- Develop students' future skills:
    - The digital competencies required by translation students were mapped out in the spring semester of the 2021/22 academic year. By the end of that academic year, it is planned to revise the learning outcomes of all courses with a view to teaching digital competencies (responsibility of the programme director).
    - In order to improve students' entrepreneurial knowledge, involve translation companies in the implementation of the course "Translation Market and Translation Service" from the spring semester of 2022 (the course lecturer is responsible). At the same time, encourage students to choose the business development courses offered at the School of Economics and Business Administration (responsibility of the programme director).
    - From the spring semester 2021/22, introduce teaching methods that support the development of collaboration skills into the translation seminars (e.g. mutual feedback of students, conducting joint simulated translation projects) (responsibility of the teachers of translation courses).

Members of the programme council

Tanel Lepsoo (Associate Professor of French Literature, Vice Director of HVLC, chair of the programme council)
Terje Loogus (Associate Professor of Translation Studies, Programme Director for Master's in Translation and Interpreting Studies)
Kadri Novikov (Lecturer in Classical Philology)
Linda Tender (student)
Tatjana Stepaništševa (Lecturer in Russian Literature)
Katrin Ojaveer (English teacher, Hugo Treffner Gymnasium)
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Raili Marling (Professor of English)
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