TARTU TERVISHOIU KÕRGKOOL
TARTU HEALTH CARE COLLEGE

SELF-EVALUATION REPORT FOR INSTITUTIONAL ACCREDITATION








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2019

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LIST OF ABBREVIATIONS

Abbreviation	Explanation
ASTRA	Abbreviation for the European Social Fund's "An institutional package measure for R&D institutions and higher education institutions"
BMLS	Biomedical Laboratory Science
CM	Childminder
CW	Care Worker
CWMHP	Client Worker for People with Mental Health Problems
EBLS	Association of Estonian Biomedical Laboratory Scientists
ECTS	A Credit Point in the European Credit Transfer and Accumulation System
ECVET	Estonian Vocational Education and Training Credit Point
EFEH	European Federation of Environmental Health
EHA	Estonian Hospitals Association
EHIS	Estonian Education Information System at MoER
EHS	Environmental Health Specialist
EKKA	Estonian Quality Agency for Higher and Vocational Education
EMT	Emergency Medical Techinician
EMWA	Estonian Midwives Association
ENU	Estonian Nurses Union
EPBS	European Association for Professions in Biomedical Laboratory Science
ETIS	Estonian Research Information System
EU	European Union
EURASHE	European Association of Institutions in Higher Education
HaridusSilm	The public visual educational and research statistics database at MoER
HB	Health Board
HS	Health Sciences (Master's Level Programme)
ICM	International Confederation of Midwives
IFEH	International Federation of Environmental Health
MAS	Masseur/Masseuse
MoER	The Ministry of Education and Research
MoSA	Ministry of Social Affairs
MW	Midwifery
N	Nursing
PT	Physiotherapy
RCUAS	Estonian Rector's Conference of Universities of Applied Sciences
RDB	Research Development Board in THCC
RDC	Research, Development and Creative activities
RG	Radiography
RPL	Recognition of prior learning and professional experience
SAIS	Electronic Admission Information System
SIS	Study Information System
TallinnHCC	Tallinn Health Care College
THCC or college	Tartu Health Care College
TUH	Tartu University Hospital
UT	University of Tartu

1. INTRODUCTION

Legal form:	A state institution of professional higher education administered by the Estonian Ministry of Education and Research
Established:	In 1811 and in 2005 named Tartu Tervishoiu Kõrgkool/Tartu Health Care College
Register number:	70005714
Address:	Nooruse 5, 50411, Tartu, Estonia
Homepage:	www.nooruse.ee
Rector:	Ulla Preeden, *PhD*
Contact person:	Kersti Viitkar, *MSc* Vice rector for academic affairs, +372 737 0203, kerstiviitkar@nooruse.ee

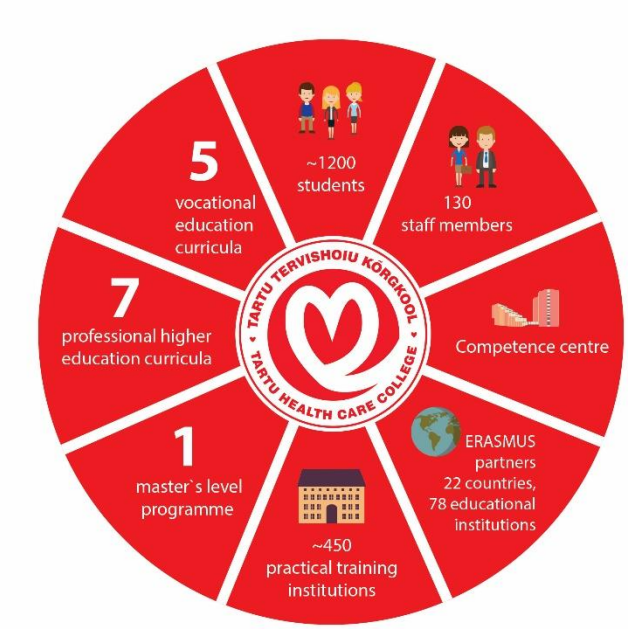


Figure 1. General data of the college (May 2019)

1.1. A BRIEF OVERVIEW OF THE COLLEGE

Tartu Health Care College (hereinafter *the THCC* or *the college*) is a state institution of professional higher education administered by the Ministry of Education and Research (hereinafter *the MoER*) functioning pursuant to the Institutions of Professional Higher Education Act (in force until 31 August 2019), the Higher Education Act (in force from 1 September 2019) (in Est.), the Vocational Educational Institutions Act (in Est.), the statutes of the college (in Est.) and other relevant legal acts.

The aim of the college is to be an internationally acknowledged professional higher education institution with a modern learning environment, providing education in the fields of health, wellbeing and service; to influence health behaviour of the population and the development of a healthy living environment as well as to develop, by the promotion of lifelong learning, the specialities of professional higher education and vocational training provided by the college through the study, research and development activities.

The competitive advantage of the college within the education system is a clear specialisation field, involving a combination of high quality of teaching, an excellent learning infrastructure and the preparation of specialists on curricula of higher education and vocational training required in Europe. In 2018 studies at the THCC were conducted on one master's programme, seven professional higher education curricula and five vocational training curricula.

Collaboration of professional higher education institutions in Estonia is efficiently organised at the level of the Estonian Rectors' Conference of Universities of Applied Sciences (hereinafter *the RCUAS*) and the Foundation of Estonian Universities of Applied Sciences where the college has belonged to

from 2005. The RCUAS is aimed to develop joint activities of professional higher education institutions in Estonia as well as to develop common statements and represent common interests in the development of professional higher education and the educational policy in Estonia. The RCUAS is a member of the European Association of Institutions in Higher Education (hereinafter *the EURASHE*).

A brief history of the college

In 1811 a school of midwives was founded by Professor Chr. Fr. Deutsch at the obstetric clinic of Tartu University; that school of midwives is considered to be the predecessor of the present college. Within about 200 years the college has been merged with different schools, had different names (the best known is the name Tartu Medical School (Tartu Meditsiinikool in Est.) that was borne by the college in 1960–2005), and provided education and training in different specialist fields and at different levels. Since 2005 the college has legally been functioning as a professional higher education institution; that change was possible due to the excellent results of international accreditation in 2004. The college is celebrating the 209th anniversary in the year 2019.

Teaching and study of the college has been conducted in different buildings, but from 2011 the THCC has its own study building. In 2008 the Government of the Republic made a decision on funding the construction of a new study building of the college and on 24 November 2010 the first stone of the building was laid. In 2011 the study building of the college was completed in Nooruse 5 with the European Union (hereinafter *EU*) funding. In 2011 architect Tarmo Piirmets was rewarded the annual award for the internal design of the college by the Estonian Association of Interior Architects.

Until 30.06.2016 Anneli Kannus was in the position of the college rector (2005–2016) and from 01.07.2016 Ulla Preeden is the rector of the college. For the first time in the college history the possession of a doctoral degree was established as a criterion in the last elections for the position of the rector in order to enable the development and opening of master's programmes at the college that had been established as one of the key outcomes of the development plan.

Main objectives and key indicators of the development plan 2015–2020

THCC **mission** is to provide competitive, high quality, innovative, international, research and development based lifelong learning in the fields of health care and social welfare within an inspiring environment.

THCC **vision** is to be an acknowledged partner in developing a happy and health-conscious knowledge society.

THCC core values are **integrity**, **development**, **human-centeredness** and **professionalism**.

The development plan 2015–2020 serves as the fundamental document for planning the activities of the THCC, forming a basis for drawing up annual action plans (see action plan 2019 (in Est.)).

Within the preparation of the development plan 2015–2020 the mission and vision of the college were revised, shifting the focus from a college-centred approach to a wider approach, recognising the role of the college in society in having an impact on the community.

In addition to the measurable key outcomes the targets and fields of activity are determined in the development plan as substantial goals for the years 2016 –2020:

2016 Cooperation – The 205th anniversary of the college was focussed around the idea of 205 good deeds (in Est.). The year 2016 focused on the quality assessment of the study programme group and preparation of joint curricula; improving the efficiency of the cohesion of activities undertaken with curricula, departments and foreign partners;

2017 Integration – The year 2017 was devoted to comprehensive integration of curricula, subjects and enhancing the cohesion between the subjects and modules, including in the assessment process;
2018 Competence – In 2018, on the 100th anniversary of the Republic of Estonia, the focus was on the activity of the competence centre in the area of patient safety. The aim, activities and development of the centre are clear inside and outside the college, community members are offered services free of charge and for a charge. The competence is evident by the registration of the master's programmes based on successful passing of the evaluation of master's programmes;
2019 Lifelong learning – The objective for the 2019 are the admissions to the international master's studies and providing an opportunity to study part-time or in a different way of organisation of studies on all curricula in order to ensure more flexible study opportunities for re-training;
2020 Cleverness and awareness – In 2020, the preparation for a new development plan will begin. In addition to studying on vocational training curricula and professional higher education curricula, a master's degree can be obtained at the college. Continuing education is offered to health care professionals as well as to the population; international collaboration is carried out on different curricula and in research. The competence of patient safety has been developed at the college and the legislation is supporting the activities of the college in provision of services to the community.

The development plan 2015–2020 includes the formulation of core values of the college as follows:
Integrity – balanced relations between mental, physical and social well-being and an environment, and an attitude to life that values health;
Development – development in an open, free, creative and innovative learning and working environment, alternatives and responsibility;
Human-centeredness – honest, respectful, dignified, equal, trusting, and caring relationships with the learners, colleagues and oneself;
Professionalism – cohesion of knowledge, skills and attitudes, commitment to professional, occupational and specialist activity.

College structure
From 21.03.2017 the structure of the college consists of the study and research structure and the administrative and support structure. (Figure 2). **The study and research structure** is formed of the pedagogical board, four study departments and the competence centre; the latter is involving the open college, the research and development board, the coordination of development projects and the services offered by the college targeted predominantly to the population, educational institutions and organisations. **The administrative and support structure** is formed of the administrative and financial department, the rectorate, the academic affairs department and the library. Respective fields of activity of the structural units are led by the rector, the vice rector for academic affairs and the administrative and finance director. As of the end of the year 2018 the college includes in total 110 positons (three positions in the rectorate, 81.5 positions in the study and research structure and 25.5 positions in the administrative and support structure).

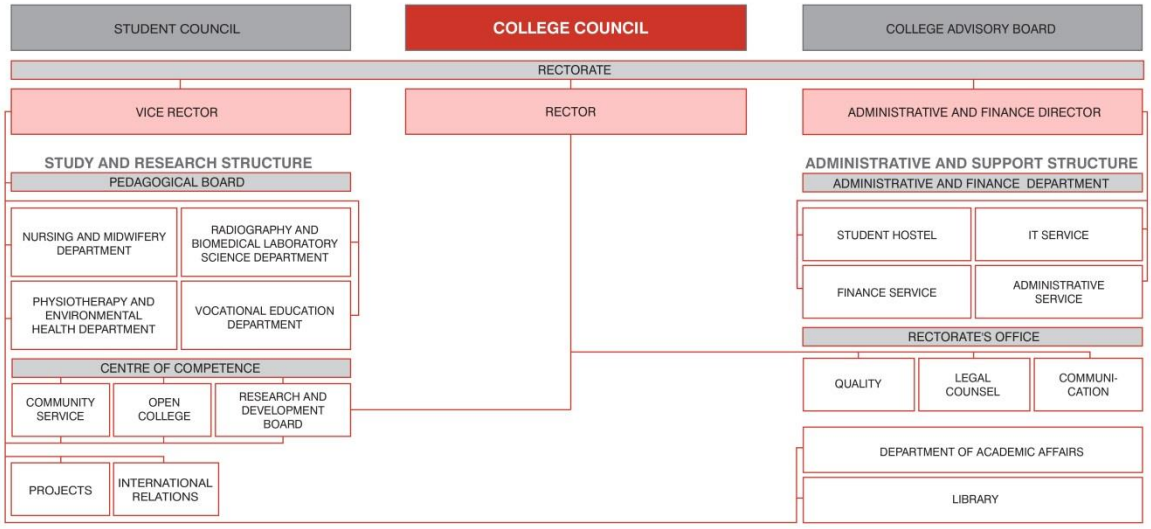


Figure 2. The structure of the THCC as of 31.12.2018

Management of the college

The highest collegial decision-making body of the college is **the college council**. Members of the college council are elected within the college. The membership of the college council consists of three rectorate members, eight representatives of the teaching staff and four representatives of the students. Functions of the council are regulated by the Professional Higher Education Act, the statutes of the college and the rules of procedure of the council.

A body of advisors connecting the college and society is **the advisory body of the college**, which is comprised of representatives of the interest groups outside the college. In 2017 the membership of the advisory body was reorganised with an aim to engage a wider management level of the collaboration partners. The organisations represented in the advisory body are as follows: the MoER, the Ministry of Social Affairs (hereinafter the *MoSA*), the Health Board (hereinafter the *HB*), the Estonian Nurses Union (hereinafter the *ENU*), Tartu University Hospital (hereinafter *TUH*), the North Estonia Medical Centre, the East Tallinn Central Hospital, Viljandi Hospital, and the City Government of Tartu.

A representative body of students and pupils (hereinafter *students*) is **the student council**, representing the students in relations with the college, Estonian and international organisations, institutions and persons. Each learner admitted to the college can stand as a candidate for and can elect members to the student council. The student council is a democratically elected responsible and organising representative body of students, including maximum 21 members. The student council elected in 2018 includes 15 members. Regular elections of members of the student council take place once a year in October; the elections are announced about on the intranet and on the information screens of the college. The function of the student council is to protect the interests and rights of the student body inside and outside the college; to inform the student body about the activity of the student council and other tasks that are in accord with the objectives of the student body. Representatives of the student council participate in the work of the college council and the curriculum boards as well as in the committees of stipends and study allowances.

According to the statutes of the college the functions of an advisory body of the rector is fulfilled by **the rectorate**, including the rector, the vice rector for academic affairs and the administrative and finance director. The function of the rectorate is to ensure a comprehensive development of the

college, the coordination of structural units of the college and the cohesion of the organisation in the achievement of its objectives.

The organisation of studies and assurance of study quality, development of the learning environment and curricula, preparation of documentation related to teaching, studies and learners and the implementation of the adopted documents as well as solving problems and single issues related to teaching and study or the organisation of their resolution belong to the sphere of responsibility of **the pedagogical board** of the college, the activity of which is led by the vice rector for academic affairs. The pedagogical board is the highest decision-making body of the study and research structure; its membership includes the vice rector for academic affairs, the heads of four study departments and the head of academic affairs department. **The study departments** are responsible for the implementation, continuous development and management of the curricula; **the academic affairs department** carries responsibility for assurance of the organisation of studies.

The responsibilities of all management levels are specified by a directive of the rector. The duties of different management levels at the college are regulated and described by the following documents: the statutes of the college (in Est.); the statutes for study and research structure; the statutes for administrative and support structure; the management system of the college, substitution and powers of the rector, the right to sign; the procedure for electing and voting for the college council; the rules of procedure of the college council; the rules of procedure of the pedagogical board; the statutes of the student body; the records management procedure.

Changes to the structure and work organisation 2015–2018

In 2015 a needs analysis of and discussion about reorganisation of the management of internal structures of the college were commenced. In August 2015 the management of curricula at the college was changed to achieve the objectives established by the development plan 2015–2020 and to facilitate the interdisciplinary collaboration between the curricula. The Biomedical Laboratory Science (hereinafter *BMLS*) and Radiography (hereinafter *RG*) curricula as hospital-based curricula were merged under joint management and the Physiotherapy (hereinafter *PT*) and Environmental Health Specialist (hereinafter *EHS*) curricula as more enterprise-centred curricula were also merged under joint management. The Nursing (hereinafter *N*) and Midwifery (hereinafter *MW*) curricula with a similar content had been merged under joint management in 2010 to ensure uniform management.

By the beginning of 2016 it had become clear that in order to increase the quality of studies and improve the internal division of tasks it was necessary to integrate the study and development processes, and the management of the study department and the development department was merged under the leadership of one vice rector. In the second part of the year 2016 the preparation was started to change the statutes of the college and start the implementation of a new structure under the leadership of the new administration. On 21.03.2017 the amendments of the statutes of the college were approved by the minister of education and research; pursuant to the amendments the structure of the college consists of the study and research structure and the administrative and support structure, operating according to the statutes adopted by the rector.

To improve the organisation of studies the academic affairs department was established in 2017 aimed at the organisation of studies at all levels of education from student admissions until graduation, incl. the organisation of practical training, drawing up timetables, counselling students in matters related to the organisation of studies and issuing certificates and graduation documents. Preliminary assessment on the extent of the impact of changes will be received during the preparation for a new development plan in autumn 2019 when asking feedback as well as analysing employees satisfaction in spring 2020.

1.2. A BRIEF DESCRIPTION OF THE PROCESS OF SELF-EVALUATION AND REPORT PREPARATION

The process of self-evaluation for institutional accreditation was commenced in September 2018 when a joint seminar was conducted by the compilers of the report and the representatives of the Estonian Quality Agency for Higher and Vocational Education (hereinafter *the EKKA*). A time-scheme and responsibilities for the development of self-evaluation was determined and the tasks of working groups were specified. On 15.10.2018 a seminar for the members of the college took place where the process of self-analysis and the activities were introduced.

From 01.10.2018 to 31.01.2019 the working groups were preparing different chapters, engaging other members and the responsible persons and students of the college as well as the representatives of the employers. Self-evaluation of the curricula is described in chapter 4 of the report. On 04.02.2019 a joint seminar for the employees of the college took place with an aim to evaluate the main processes of the college and to identify the strengths and improvement areas. From February to April in 2019 discussions were conducted in the pedagogical board, the rectorate and the advisory body. On 24.04.2019 and 27.05.2019 joint discussions of the report took place, involving the representatives of the college council, the rectorate, the pedagogical board and the advisory body. At the beginning of May 2019 the report was delivered to the members of the college, the student council and the advisory body for discussion and comments. The report was also delivered to the representatives of EKKA. The self-evaluation report of the college was approved by the college council on 14.06.2019. In June 2019 the report was translated into English and designed; on 12.07.2019 it was submitted to the EKKA.

Self-evaluation of three professional higher education curricula (chapters 4.1.–4.3.) and all study programme groups of vocational education (chapter 4.4.) are submitted by the college for institutional accreditation. The professional higher education curricula involve the curricula of EHS, BMLS and MW. Changes to the curricula were made after the successful passing of the quality assessment of the study programme group in 2016. External evaluation of curricula in the process of institutional accreditation in 2019 provides a good opportunity to identify the efficiency of the implemented changes.

1.3. AGGREGATE DATA OF LEARNERS

As of 31.05.2019 the number of learners at the college is 1059 (Table 1). The number of students admitted to professional higher education curricula has gradually increased due to additional admissions to the N curriculum and a part-time PT curriculum study group opened in the academic year 2018/2019. In 2018/2019 60 master students were admitted to the college for the first time. Data of the learners are given in a separate table.

Table 1. Aggregate data of learners at the college (2018/2019 data as of 31.05.2019 (statistical data of the college), other data by HaridusSilm* as of 10.11.2018)

* HaridusSilm is the public visual educational and research statistics database at MoER

STUDY LEVEL		ACADEMIC YEAR 2014/15	2015/16	2016/17	2017/18	2018/19
Professional higher education	Students	1068	1057	1022	971	870
	Admitted	262	342	357	359	360
	Discontinued	135	133	117	106	79
	Graduated	259	264	265	239	153
Master's studies	Students	-	-	-	-	60
	Admitted	-	-	-	-	60
	Discontinued	-	-	-	-	-
	Graduated	-	-	-	-	-
Vocational education	Pupils	74	95	143	150	129
	Admitted	46	64	114	108	111
	Discontinued	7	15	27	34	17
	Graduated	36	62	86	99	9
In total at the college	Learners	1142	1152	1165	1121	1059
	Admitted	308	406	471	467	531
	Discontinued	142	148	144	140	96
	Graduated	295	326	351	338	162

An increase of admissions to vocational training curricula is due to the opening of workplace-based study in 2016/2017 (supported by project *The development of vocational and higher education in meeting labour market needs* (the PRÕM project) of the European Social Fund) and the opening the curriculum of masseur/masseuse (hereinafter *MAS*). In total the proportion of pupils who complete vocational training curricula in the form of workplace-based study was 50% in 2017 and 38.4% in 2018.

Each year the admission numbers of all curricula are approved by the education committee of the MoSA. Admissions to the N and MW curricula are regulated until the year 2020 by a consensus agreement concluded in 2016 by the MoSA, the MoER, the Estonian Hospitals Association (hereinafter the *EHA*), the Tallinn Health Care College (hereinafter *TallinnHCC*) and THCC. The consensus agreement with the collaboration partners is undoubtedly an essential achievement in order to ensure the sustainability of the provision of health care services and a sufficient number of student places in the fields of nursing and midwifery at the first level of higher education.

The college contributes, in collaboration with the employers, to the organisation of studies outside Tartu based on the regional needs:

- Until 2016 nursing studies based on a shortened programme were organised in collaboration with different health care institutions across Estonia (Järvamaa, Rakvere, Viljandi, Jõgeva);
- In the academic years of 2017/2018 and 2018/2019 studies of BMLS curricula was opened in Tallinn in collaboration with the hospitals in Tallinn;
- In the academic year 2018/2019 a part-time study group on PT curriculum was opened in Tallinn in collaboration with Astangu Vocational Rehabilitation Centre;
- Within vocational education, school-based study of care workers (hereinafter *CW*) is organised in South-Estonian counties by the college in collaboration with the health care institutions.

In collaboration with the employers a programme *Development of the practical training system in vocational and higher education, including school practice in teacher training* is carried out and within a project *Promoting the reputation of vocational education, extending workplace-based training* (the PRÕM project) workplace-based study of childminders (hereinafter *CM*) and client workers for people with mental problems (hereinafter *CWMHP*) is organised.

The analysis of admissions competition is described in chapter 3.8., the analysis of dropout in chapter 3.10. and also in self-evaluation of the curricula.

1.4. AGGREGATE DATA OF TEACHING STAFF AND SUPPORT STAFF

The total number of employees of the college has increased about 10% within last five years (incl. the number of teaching staff). At the same time the full-time equivalent of teaching staff positions has been at a comparable level, showing a bigger amount of part-time staff members or employees practising in other institutions. On the other hand, a slight increase of the number of full-time teaching staff members is evident, considering all positions, which is an essential indicator for sustainable and high quality organisation of work at the college (Table 2.).

Table 2. General data of staff as of 31.12.2018

STAFF OVERVIEW	2014	2015	2016	2017	2018
Total number of employees	**118**	**118**	**122**	**130**	**132**
Number of positions	**103**	**105.25**	**107.25**	**109.5**	**110**
Division by gender					
- women	104	104	106	113	117
- men	14	14	16	17	15
Number of teaching staff	**80**	**77**	**81**	**88**	**88**
- FTE positions	70	67	69	72	72
- incl. 1.0 positions (% of FTE)	33 (47%)	33 (49%)	39 (57%)	41 (57%)	38 (53%)
Average age	43.9	44.7	45.0	46.4	45.5
PhD	8 (10%)	7 (9%)	9 (11%)	12 (14%)	11 (13%)
Master's degree	53 (66%)	52 (68%)	51 (63%)	57 (65%)	56 (64%)
First level higher education	19 (24%)	18 (23%)	21 (26%)	19 (22%)	21 (22%)
Number of non-academic staff	**38**	**41**	**41**	**42**	**44**
-FTE positions	33	38.25	38.25	37.5	38
Average age	42.3	44.5	44.4	43.6	44.2
PhD		1 (3%)	1 (3%)		
Master's degree	8 (21%)	11 (28%)	12 (29%)	11 (26%)	13 (30%)
First level of higher education	9 (24%)	9 (23%)	7 (17%)	10 (24%)	10 (23%)
Secondary education	21 (55%)	19 (48%)	21 (51%)	21 (50%)	21 (48%)

It is important that the college has the teaching staff members who are actively practising in the professional field, but at the same time it is also important to have the teaching staff members who are completely devoted to the development of the college and to the achievement of its objectives.

A small increase of the number of teaching positions is definitely essential, e.g. 62.0 in 2014 and 66.0 in 2018. Not all teaching positions are filled by ordinary teaching staff members, so, the unfilled positions are filled by experts in the field, engaging them in teaching based on an authorisation agreement. An increase of the number of teaching staff members with a doctoral degree is a positive change that is also related to the achievement of the key indicators of the development plan of the college.

To achieve the objectives of the college five additional support staff positions were created in 2014–2018 that are related to the implementation of general support activities of the college (the procurement specialist, the legal counsel-administrative assistant and the academic advisor), the development of research, development and creative activities (hereinafter *RDC*) (the development specialist), the development of the competence centre (the position of competence centre developer for a fixed term), the increasing role of internationalisation (the international relations specialist) and with an aim of better operation of other support processes. The average age of employees of the college has been stable within the period of 2014 to 2018.

The organisation and statistics of continuing education is described in chapter 3.12.

2. MAJOR CHANGES BASED ON THE RECOMMENDATIONS OF PREVIOUS INSTITUTIONAL ACCREDITATION AND ACCREDITATION OF VOCATIONAL STUDY POGRAMME GROUPS

2.1. INSTITUTIONAL ACCREDITATION IN 2013

Table 3. Main development areas (institutional accreditation in 2013)
Based on the decision of the assessment committee of the Estonian Quality Agency for Higher and Vocational Education of 21.02.2013

RECOMMENDATIONS	CHANGES
1. The College would benefit from leveraging fully their potential with better targeted communication strategy towards new target groups (older student candidates), towards stakeholders other than immediate partners (smaller health and social care providers, outpatient providers, nursing and mental health providers, school and other preventive health services providers) and towards regions outside immediate vicinity.	• In 2013–2016, to popularise the activity of the college and extend the range of target groups Healthy Thursdays were organised – different events (e.g. measuring vital signs) and workshops organised in the rooms of the college once a month in collaboration between the college, the nurses union and nursing care providers. From 2017 information days with a similar aim and content and with the same partners are organised for community in collaboration with TUH. • In 2017 the competence centre was established that includes among other duties the provision of services to different target groups. The variety of training courses and the range of target groups of in-service training have been extended. • To implement more efficiently the potential of the college the position of communications manager was established and filled in 2013. • To extend the range of target groups the college is collaborating with the Unemployment Insurance Fund and other organisations, organising open door days, participating in fairs and researchers' night organised by the science centre AHHAA etc. (chapter 3.12.).
2. Teaching methodology should be clearer defined in the perspective of general competences.	• In 2016/2017 an analysis was carried out involving the implementation of study methods and the development of general competences on all the curricula, focussing on the development of study and assessment methods that support the development of general competences (e.g. simulation based training, OSCE – Objective Structured Clinical Examination). • The format of syllabus was revised by specifying the cohesion between the study methods and learning outcomes. The concept of learning approach was added to the curricula and learning outcomes of modules were specified (chapters 3.7., 3.8., 4.).
3. Enable elective courses for students in English to increase international mobility and develop foreign language skills of students.	• Offering and conducting subject courses in English was identified in the development plan as a priority of the study departments. Regular international collaboration takes place, and a number of subject courses in English are offered on the curricula (chapters 3.5. and 4.).
4. The college would benefit from the development of guidelines and policy rules for quality control of the assessments.	• To improve the organisation of studies, increase the quality of studies and promote the systematic monitoring of study results the academic affairs department was established, including changes in the organisation of studies and specification of the spheres of responsibility. • Quality indicators of the study activity and the collection of the relevant data were specified in the quality manual. • To assess the results of studies the description of assessment in a

	syllabus was specified. • The questionnaire regarding dropout was revised and the monitoring process of students with insufficient academic progress was documented (chapter 3.10.).
5. To develop one overall support system that takes into account all the strengths of different parts and divides the tasks according to that, so there would be one clear system and the students would know what kind of help different parts are providing.	• The college has continuously analysed the feedback on counselling of students and made changes in the counselling system, specifying the spheres of responsibility of the support staff. • Due to the structural changes of the college the academic affairs department was established in 2017 and the system of counselling of students was improved, providing the students with a more personal counselling and a seamless organisation of studies (e.g. the development of the timetable and the organisation of practical training were decentralised). Work is continued with the analysis and improvement of counselling in study matters (chapter 3.10.).
6. Evaluate the needs of Russian speaking students (esp. in their first year).	• Elective studies of the Estonian language are offered by the college. Regular conversation groups take place aimed to improve the language skills. In addition, language studies are offered within a particular language project (chapter 3.10.).
7. It is recommended to enhance in international networks of the curriculum on EHS.	• The European Federation of Environmental Health (hereinafter *EFEH*) and the International Federation of Environmental Health (hereinafter *IFEH*) are the main international collaboration partners in the field of environmental health. The teaching staff members of the curriculum are acknowledged experts in scientific committees of international conferences and as keynote speakers. • Due to active participation of the teaching staff of the curriculum of EHS in a public health conference in the spring of 2018 a collaboration agreement was concluded the same year by the college for the organisation of an international conference Public Health and for increasing the scientific capacity. In 2018, the IFEH granted the college the right to organise in Estonia the fourth conference IFEH Academic World Conference on Environmental Health 2021. International collaboration on the curriculum is active, supporting duly the curriculum development and research (chapter 4.1.).
8. It is recommended to develop a strategy to participate in joint research projects with universities and international research funding projects to support methodological skill-set for R&D.	• The college has two strategic source documents – the development plan 2015–2020 and the quality manual (in Est.) and the development of additional strategies within the development plan period is not considered justified. Specific action plans for one year are drawn up in order to develop particular fields. • In the years 2015–2020 internationalisation was determined as one of the priorities and the college collaborates efficiently in the field of curriculum development with universities of applied sciences abroad (e.g. collaboration agreements with Universities of Applied Sciences such as Jyväskyla, Klaipeda, Metropolia) as well as in Estonia, e.g. TallinnHCC (development of the master's programme in health sciences (hereinafter *HS*)) and the University of Tartu (hereinafter *UT*) (joint research publications and a patentable invention). • In the preparation process of the development plan 2020–2025 a need for separate strategies for the research and development activity and for internationalisation is analysed at the college (chapter 3.5.).

2.2. ACCREDITATION OF VOCATIONAL STUDY PROGRAMME GROUPS IN 2014

Table 4. Main development areas (accreditation of vocational study programme group in 2014)
Based on the accreditation decision of vocational study programme groups by the assessment committee of 28.11.2014

RECOMMENDATIONS	CHANGES
1. To find possibilities for re-opening of childminder speciality.	• Vocational training of CM, level 4, was opened in 2015 with the support of the education department of Tartu city government. From 2016 workplace-based study is offered in addition to school-based study.
2. Analysis of a need for training of emergency medical technicians (hereinafter *EMT*), level 5, and preparations for opening.	• So far, the employers have not initiated the development of the professional standard or informed about the need for training of EMT, level 5. In case the initiative will be shown, the college is ready to develop the curriculum.
3. Application for the right to award the profession of EMT.	• The professional council of health care decided to grant the college the right to award the profession of EMT, level 4, to the graduates of the curriculum of EMT from 01.09.2017 (minutes of the meeting 27.04.2017 no. 6.1-7/6, decision no. 1.1.).
4. Specification of the vision of the study programme group for a new development plan period.	• Formal education is planned in the fields that lack qualified work force based on the OSKA (a system of labour market monitoring and future skills forecasting, in Est.) report by the Estonian Qualifications Authority, and the needs of the labour market. For example, based on the needs of the labour market new curricula are being developed in collaboration with the international partners: the curriculum of nutritional advisor and the curriculum of podiatrist.
5. Drawing up an activity and training plan of the study programme group based on the vision.	• Vocational education is part of the college and the vision of the study programme group is in accord with the vision of the college. While preparing the development plan and identifying the priorities of the college all study levels of the college are taken into account, no separate documents are prepared. The activity and training of the group of vocational training curricula is planned within annual action plans based on the development plan and no separate activity and training plan for vocational education is drawn up.

3. SELF-EVALUATION OF THE COLLEGE BASED ON THE STANDARDS

3.1. STRATEGIC MANAGEMENT

Standard: **Development planning at the college is purposeful and systematic, involving various stakeholders. The college evaluates regularly the achievement of its stated objectives and the impact of its activities.**

Development planning at the college

Functioning of the college is based on different documents regulating higher education and vocational education and training, ranging from the legal acts like the Institutions of Professional Higher Education Act and the Vocational Educational Institutions Act that are regulating the institutional activities to various national strategies. The college itself has two strategic source documents: the development plan 2015–2020 and the quality manual (in Est.). In addition, each year an action plan (e.g. see action plan 2019) is drawn up based on the priorities stated in the development plan. The principle of the Deming cycle (*plan-do-check-act*) is followed in the quality management system of the college.

The fundamental document of the college activities is the development plan that is based on valid legal acts, the mission, vision and core values of the college. It is the aspiration of the college that its core values would be followed in all activity fields. The current period of the development plan is ranging from 2015 to 2020. The preparation and monitoring process of the development plan is led by the rectorate of the college. The staff members, learners, graduates and collaboration partners are engaged in the preparation process. Development planning and drawing up of the development plan are preceded by thorough analysis of the current situation and implementation of the development plan. Planning of a new development plan should involve the following: vision statement of the college; review and, if required, revision of the mission and core values of the college; identification of the strategic objectives as well as objectives for the fields and identification of activities necessary for the achievement of objectives. The appropriateness of the key indicators should also be reviewed. For example, due to the opening of master's programmes one of the challenges of the college is to grow and support teachers with a doctoral degree, and a need for a wider engagement of foreign lecturers in teaching. In addition, from 2016 state funding of higher education is more focussed on internationalisation (incl. the proportion of international students).

THCC and TallinnHCC are the only higher education institutions where N and MW education at level six is provided in Estonia. The rest of higher education curricula at the college are mostly unique in Estonia and there is no other school where to acquire these specialities, e.g. RG, EHS, BMLS. The speciality of PT, level 6, can also be acquired at the UT, but the PT education provided at the college is characterised by a bigger applied component, e.g. the volume of practical training in a working environment forms 28% of the total volume of the curriculum. Regarding the specialities that are also taught in other higher educational institutions, collaboration is conducted with TallinnHCC and the UT, but common components can be found in a number of other higher education institutions in Estonia. For example, the master's programme in HS was developed in close communication and collaboration between the college, TallinnHCC and the ENU. On the one hand, in order to assure a similar content and quality of the programme and, on the other hand, to avoid the duplication with the master's programme in nursing management and pedagogy offered by the UT. It was the feedback by the employers that served as a basis for making a decision to maintain within the curriculum four clear specialisation pathways adopted by regulation (in Est.) of the minister of social affairs of 11.06.2001. The uniqueness of THCC with its focus on health care specialities makes it

possible to have a specific role in the landscape of vocational and higher education landscape, and to have successful collaboration with similar higher education institutions in Estonia as well as in Europe, and to carry out networking on all curricula. Vocational training, professional higher education and master's level studies all together in one educational institution has facilitated integration, flexibility and interdisciplinary collaboration that, in turn, provides an opportunity to develop curricula at different levels of education at the whole college.

Achievement of the objectives and impact of the activities of the college

An action plan is drawn up for each calendar year based on the objectives of the current development plan and including concrete activities in the particular year, the responsible persons and the terms. An action plan is adopted by the college council, taking into account the cohesion with the development plan and prior action plans, purposefulness, the compliance of the planned activities with the relevant objectives as well as the feasibility of the objectives. An action plan is introduced to all employees in a monthly briefing. From 2017 the action plans were made more detailed and the tasks descriptions more concrete, including the responsible persons (see as an example action plan 2019). Implementation of the development plan is continuously monitored by the rectorate and the pedagogical board, and evaluated by the college council on the basis of the annual report (formerly named *annual financial report*). An annual report is compiled each calendar year and submitted to the MoER at the latest by 31 March (annual reports 2016, 2017 and 2018). An annual report is also evaluated by the advisory body of the college; the feedback by the advisory body on annual reports of 2017 and 2018 was very positive, highlighting the value of the content, the presentation of data and the readability of the report.

Analysis of the key indicators fulfilment of the college development plan shows that it is possible to achieve the majority of the stated target levels.

Essential collaboration partners of the college involve the employers, graduates, educational institutions, the unemployment insurance fund, the MoSA, the MoER, Tartu City Government, professional associations, and career and counselling centres.

The employers are purposefully engaged in the collaboration aimed at curriculum development and estimation of the need for labour; they collaborate also as practice bases, partners in projects and research studies, and experts in teaching, supervising and assessing final theses. Other educational institutions in Estonia and abroad are engaged as collaboration partners in order to jointly contribute to study, research and development activities. As of May 2019 the college has in total 464 contracts for the organisation of practical training and 24 quality agreements.

At the national level, the prognosis for labour and skills provided in the OSKA report are essential in the field for the years of 2015–2025, including an analysis of potential development trends in the field in future, an estimation of a need for labour in the fields with a growing trend and how should the content of training be changed so that the skills would meet the needs of the labour market. The activities of the college are predominantly based on the results of research in the fields of health and social work. Based on the OSKA report completed by the first half of 2017, the prognosis for the skills and labour in the field of health care shows a continuously increasing employment rate, and the need for labour in main professional fields is growing at least 10% in coming 10 to 15 years.

Based on the key indicators of the development plan, the college is monitoring the age and the level of education of the teaching staff as well as the employee satisfaction with the working environment. The same way are evaluated the total budgetary funds, incl. target funding of external resources and investments, the impact of RDC activities based on the number of publications and

service to society (more detailed in chapters 1.1. and 3.3., and in linked documents quality indicators and fulfilment of the development plan of the college).

The college has established an objective to be a knowledge-based community developer, by informing indirectly through different information channels (more details on communication statistics in chapter 3.2.) and directly through offering services to community (more details in chapter 3.12.). The college has been an essential partner in the development of educational policy as well as health care policy.

Examples:

- In 2015 the college as a health developer in society was awarded by the EHA for a dignified contribution to the Estonian health care system; the ministry of social affairs valued an excellent collaboration, and the rector of the college Anneli Kannus, as a finalist in the competition for *the Education Leader of the Year,* was awarded a letter of appreciation by the minister of education and research for care, devotion and excellent work;
- Active participation in the management team and working groups on updating the Higher Education Act (in Est.) in 2016–2018;
- Active participation in activities of the RCUAS. The RCUAS is aimed to develop joint activities of professional higher education institutions in Estonia as well as to develop common statements and represent common interests in the development of professional higher education and educational policy in Estonia. The most successful challenge of recent years has been the 28th annual conference of EURASHE organised in collaboration with the partners on 18.–21.04.2018 in Tallinn, Estonia. The main topic of the conference was *Partnership for Digital Future – Strategic role of professional higher education for society*. The rector of the college Ulla Preeden was in the position of the chairperson of the RCUAS in the academic year 2018/2019. In addition to the collaboration of rectors, active communication and collaboration is also taking place at the levels of vice rectors for academic affairs and quality managers;
- Five teaching staff members of the college participated in the development of *The Strategic Plan for Nursing and Midwifery in Estonia 2011–2020*, with the rector of the college in the management team as an expert. In 2019 the college is continuously contributing to the development of a new strategy by the participation of four experts from the college;
- The vice rector for academic affairs participated as an expert in the preparation of the OSKA report in the field of health care in 2017.

Continuing education courses of the open college, the research and development board as well as community services are included in the structural unit of the competence centre of the college with an aim to improve the community service and cohesion. This is a new and innovative solution for the college, facilitating more efficient information dissemination and communication of the strengths of the college, empowerment of and collaboration with (potential) partners, ranging from individuals to organisations and authorities. The main role of the competence centre in the field of development activities has so far been related to the extension of opportunities for service learning, i.e. offering services within the studies (more details in chapter 3.12.).

Strengths:

1. The college has a relevant role in higher education and vocational training in Estonia and a diverse collaboration with the employers at different levels;
2. The college is an essential partner in the development of educational policy and health are policy;
3. Performance indicators of the college are available to the public (thorough annual reports), they are continuously compared with the indicators of other higher education institutions and improvement activities are planned.

Improvement area: the targets established in the preparation process of the development plan 2015–2020 need to be reviewed and revised considering the changes in society. **Planned improvement activity:** to evaluate in the preparation process of the development plan 2020–2025 whether the stated targets are relevant and up-to-date.

3.2. RESOURCES

Standard: **The higher education institution develops its staff and manages its physical and financial resources in a purposeful, systematic and sustainable manner. Internal and external communications of the higher education institution (including marketing and image-building) are targeted and managed.**

Staff management

The college has a functioning system for staff management; the process is described in the quality manual (in Est.). The college monitors regularly the quality indicators related to the staff and employee satisfaction. The college values and supports the development of employees on the basis of common principles by implementing the knowledge, skills, experience and attitudes of the employees for the achievement of the college objectives. A need for staff is analysed based on the process, and additional positions are opened or the duties specified, if required. For example, a position of the international relations specialist (with a 0.5 workload) was created in 2018 due to the extension of internationalisation at the college and based on the feedback given by the graduates. The former position of the international relations specialist was re-named as the chief international relations specialist and the range of duties was extended by adding the coordination of all international activities at the college in collaboration with the rectorate and the departments.

The principles for position filling, competitions and recruitment are transparent and clear. The academic positions are filled on the basis of an open competition; in case a non-academic position becomes vacant, the initial search for staff is conducted by the direct supervisor or the position is filled on the basis of an open competition. The college has established qualification requirements for the academic staff as well as for the non-academic staff; the relevant procedures have been established by a directive of the rector and are available on the intranet. In 2017–2019 the competitions for non-academic positions have been high (more than 10 candidates per position), the competitions for academic positions have been stable over years.

Work-related activities of the staff members are planned within a development interview in collaboration with the direct supervisor based on the needs of the college, personal development goals of an employee and the job description. The employees have an opportunity for self-improvement, within their workload, in the specialist, pedagogical and/or management areas, training in a working environment or formal education in order to develop their competences.

The results of staff surveys show clearly the employees' satisfaction with the possibilities for in-service training; 90% of the respondents completely agree or agree with the statement that the employees are provided with sufficient self-improvement based on their wishes and needs (Figure 3).

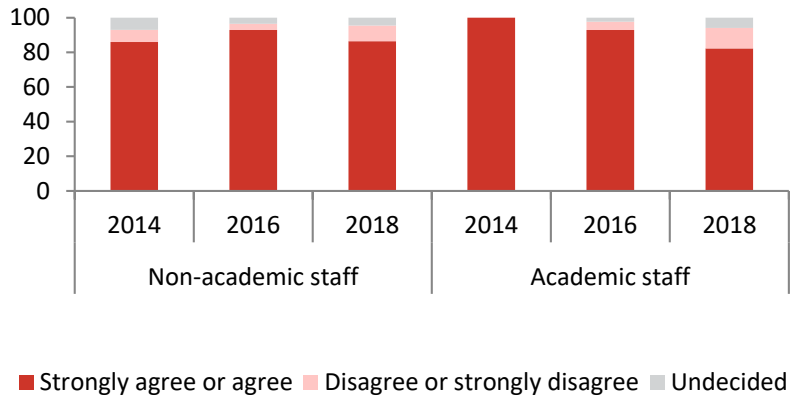


Figure 3. Staff satisfaction with the possibilities for in-service training (percentage of respondents)

The employees of the college can use the opportunities of the Erasmus+ and other mobility programmes meant for employee training, teacher exchange and training in a working environment, for participation in different seminars, international weeks, trainings in Estonia and abroad as well as for participation in projects and international networks (chapters 3.5., 3.11. and 3.12.). The recruitment, of academic staff members, planning of working time, supporting the self-development is described in chapter 3.6.

The college values the post-graduate training of the teaching staff and contributes to the increase of the educational level of the staff.

Examples:

- In 2018 the motivation and recognition procedure of the college was updated, the revision of the content was participated by all staff members. From 2019 the remuneration in similar positions will be differentiated, depending on the possession of a doctoral degree;
- In planning the working time of the academic staff members up to 120 hours per academic year is planned for participation in post-graduate training.

As of the year 2018, seven employees commenced or continued their master's studies and eight teaching staff members continued their doctoral studies.

The staff members are engaged in the planning and implementation of development at the college. Monthly staff briefings take place; the briefings are video recorded and can be re-watched later on. The teaching staff members have an opportunity to be represented in the college council and they can participate in various development working groups (e.g. working groups on simulation based training, self-evaluation guidelines for practice bases, internal communication etc.). Twice a year joint trainings are planned based on the needs of the staff; at the beginning of each academic year a traditional information day is organised for the staff.

Currently there are five qualified mentors at the college to support the adaptation process of newly recruited employees. The conduct of mentorship is coordinated by the quality manager and it is implemented for academic staff as well as for non-academic staff. The mentors are guiding the activities of new employees within the first working year, planning their training and counselling, if required, and directing the personal development of an employee.

The college has a functioning system for motivating and rewarding the employees. For example, there is a tradition to elect *the Colleague of the Year* among the academic staff and the non-

academic staff. At the end of an academic year all staff members are given an opportunity to elect his or her favourite colleague and add some relevant comments; the elected staff members are given a small memento on the staff information day at the beginning of new academic year. The students of each curriculum elect also *the Teacher of the Year* who are given a small memento and whose photos are published in the college web-magazine *Tervist!* and in the annual report. Each year the teaching staff members are recognised by the college with letters of gratitude given for specific activities, e.g. for the supervision of a final thesis awarded a national or international recognition, successful participation in a research study, successful completion of projects, promotion of sport activity at the college. All staff members have an opportunity to make proposals to the rectorate for rewarding of colleagues. The employees are rewarded for outstanding work results with monetary awards as well as with recognition and gratitude letters.

Position-based wages are compared on the basis of average wages in universities, other professional higher education institutions and in the health care sector, and, if required, the wage rates at the college are corrected based on the budget resources of the college. The comparison of the average wage rates of lecturers in higher education institutions of Tartu (the Pallas University of Applied Sciences and the Estonian Aviation Academy; the UT and the Estonian University of Life Sciences) and some professional higher education institutions in Tallinn (TTK University of Applied Sciences and TallinnHCC) administered by the MoER is given in Figure 4. In Tartu the average wage rate of the college is comparable with the averages of the universities although there are clear differences between the fields, with higher average wages at the Estonian Aviation Academy and lower average wages at Pallas University of Applied Sciences.

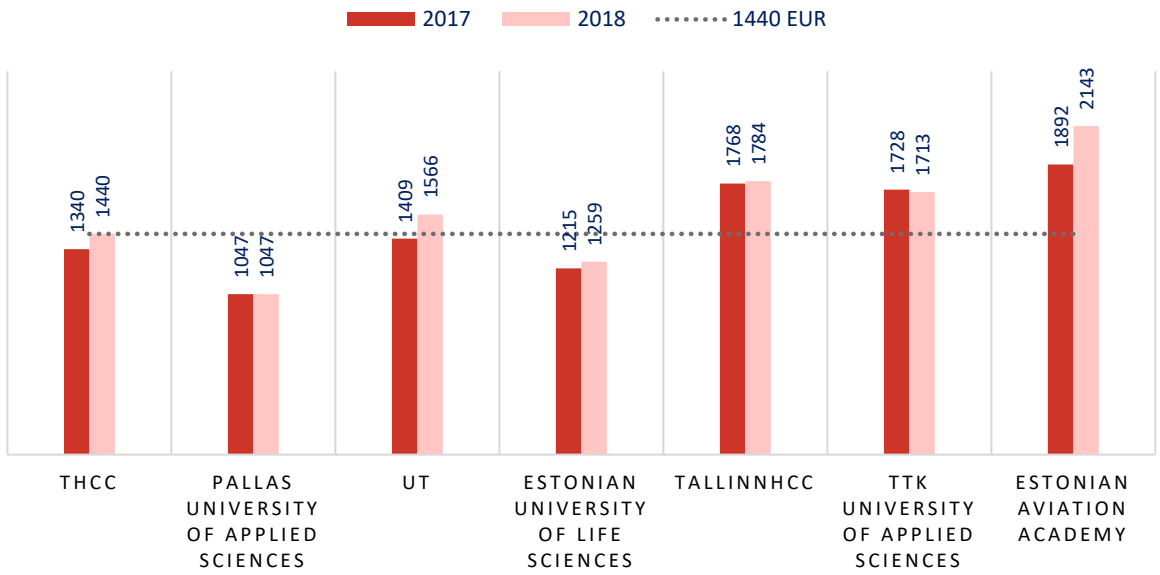


Figure 4. Comparison of average wages in euros of full-time lecturers in 2017 and 2018* (in euros)
* Data of professional higher educations as a result of collecting the quality indicators in RCUAS quality working group; data of universities from Rector's Council website (in Est.).

The basic wage rates of the college employees were increased on the average by 9% in 2018. The increase of the basic rates was differentiated, with the biggest increase in the wages of docents (by 13%), due predominantly to a need for successful achievement of the development objectives of the college (opening of master's studies). The wages at the college were additionally corrected in 2019, with a more even increase by about 6%. A need for the correction of the basic wage rates is a direct result of the wage increase in the private sector due to the economic growth and the average rates of comparable positions in other higher educational institutions and other institutions. In 2016–2017 the basic wage rates at the college were not corrected.

Financial environment

The college income budget consists of three parts – state activity support, target funding and income related to economic activities. A new model of activity support in higher education was fully implemented in 2017. According to this model the activity support budget is formed as follows: annual baseline funding – 80%, performance funding – 17% and 3% based on the fulfilment of the performance agreement signed with the HTM. The system on the whole enables comparison of higher education institutions taking into account the proportional increase in the criteria therefore keeping a stable level is not positive as it results in a smaller budget of the college. The system on the whole is based on the re-distribution principle, i.e. the higher education institutions with higher increase in performance indicators get additional financial resources at the expense of educational institutions with less increase in performance indicators. So far the college has been able to increase the annual activity support based on the general increase of state funding for higher education and the good results of the college according to the funding criteria (Figure 5).

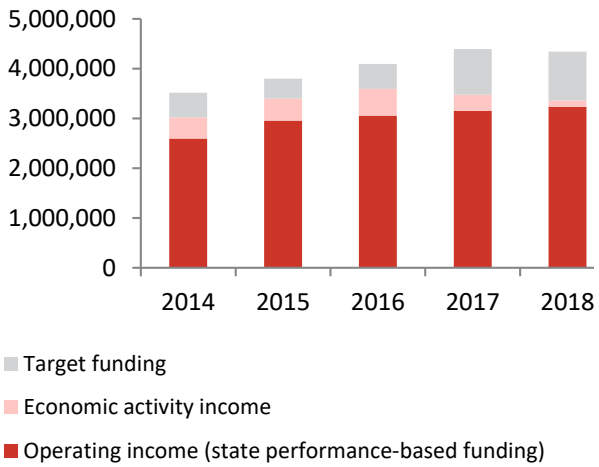


Figure 5. Division of income (in euros)

Unfortunately, one has to admit the fact that the performance indicators of the college are above the average and the increase in performance indicators cannot continue endlessly. It goes without saying that the higher education institutions with lower results have better growth opportunities and, therefore, a decrease in state funding for the college is quite probable in coming years. The college has informed the MoER about the anomaly of the state funding system regarding a potential budget decrease independent of the activities of the college.

Target funding (excl. study allowances) is mainly based on projects, depending directly on the support periods of the EU. Target funding has been used for the implementation of development activities, for investments into the building and equipment of the college and to a lesser extent for paying study allowances and stipends. The project activities have been active and successful over years. A current HiT! project based on the ASTRA programme is a good example with a budget of 592 000 euros from structural support resources. The purpose of the project is to enhance the competitiveness and the capacity of service to society at the college. As a result of the project the competitiveness of the college will increase and an international master's programme in radiography will be opened with a specialisation pathway in radiotherapy. Within this project skills lab equipment for simulation-based training and the anatomage table that is unique in Estonia have been acquired, the activities related to the structural changes and development of the college have been supported and a master's programme in radiography has been developed.

Income related to economic activities is mainly due to continuing education courses, fee-charging studies and the accommodation service provided by the dormitory. The college is aiming to extend the provision of fee-charging studies by opening international fee-charging master's programmes in RG (2020) as well as offering fee-charging formal education (vocational training curricula and part-time studies).

Cost budgeting of the college is based on its actual needs, i.e. bottom-up each year in December-January. The budgeting process is described in document *The procedure for the use of state funding and income related to economic activities at Tartu Health Care College* and is availbale on intranet.

Table 5. Distribution of income and costs (incl. the proportion of RDC activities) (in euros)

	2015	2016	2017	2018	2019
Activity support	2 956 398	3 055 207	3 148 538	3 230 289	3 400 531
Incl. own funding (RDC)*	*25 505*	*12 302*	*34 723*	*34 800*	*41 754*
External funding (RDC)*	124 426	103 098	293 122	570 366	402 172
Purchase of learning aids	10 765	128 593	509400	72 629	32 310
Immovable investments	259 000	445 334	330 000	200 000	190 000
Allowances to learners	182 915	106 279	114 096	109 296	117 736
In-service training	30 000	50 000	55 000	58 382	60 186
Other services	1 000	4 725	4 725		
Accommodation activity**	190 000	200 000	130 000	100 000	100 000
Total	**3 754 504**	**4 093 236**	**4 330 481**	**4 340 962**	**4 302 935**
***incl. RDC costs**	149 931	115 400	327 845	605 166	443 926
RDC %	4%	3%	8%	14%	10%

** methodology changed in 2017

A decrease in the accommodation activity from 2017 is shown in Table 5. These are indicative numbers of the budget and the decrease in value is caused by changes in the financial accounting methods used under the administration of the MoER, the actual budget for economic activities has not decreased. From 2017 only the short-term accommodation activity is shown under economic activities, the long-term rent is accounted as recovery of expenses and it is not shown under the income of economic activities.

Funding of RDC activities at the college is project-based and therefore not stable. An increase in the funding of the RDC activities is related to the ASTRA project and with completion of this project the proportion of the RDC funding will drop to the level of 3–4%, as it was formerly. The stability of the RDC funding could be facilitated by creation of a state funding mechanism targeted to professional higher education institutions; this mechanism is currently absent.

The college has drawn up an investment plan for five years that is annually corrected. Each year student activities are supported from the college budget, e.g. the participation in student conferences, intensive courses and sport competitions, the organisation of events and compensation for accommodation costs related to practical training.

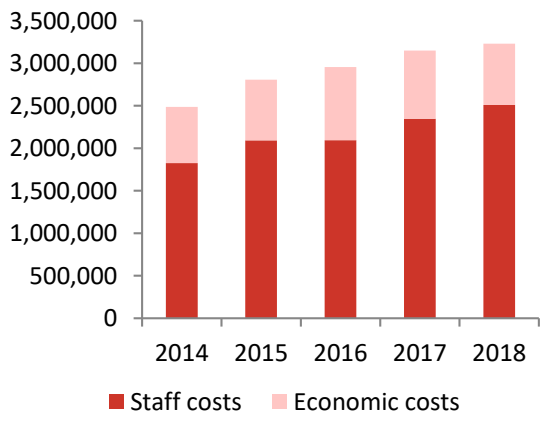


Figure 6. Distribution of costs (in euros)

The expenditures on staff have constantly increased and the economic expenditures decreased within the activity costs (Figure 6). Savings of economic expenditures have been achieved by updating/development of study rooms and reorganisation of practical training.

Risk management is conducted with the help of the following measures: checking the budget implementation (4 times per year), inventory of material resources (once a year, incl. revaluation of the assets), audits (once or twice a year, e.g. audit of accounts, IT audit, image survey, evaluation of the admissions organisation) and the insurance of property.

College environment

The buildings of the college form an integrated campus consisting of the study building and the dormitory. Floors 0, I and II in the dormitory are additionally used for study purposes. The total area of study rooms is 8232 m^2; in addition, the living space for accommodation of 400 students (about 5040 m^2). The management of study rooms is based on state activity support and the dormitory is managed on the basis of own funding. By 2018 all the rooms in the dormitory meant for accommodation were renovated with no state resources provided for the internal works.

The lecture rooms and skills labs of the college are modern with high-level equipment; the appropriate and efficient use of the rooms is continuously monitored. The rooms can be rented by organisations outside the college. Teaching/learning aid investments are made each year, in total for 1923 031 euros during the period from 2015 to 2019. Various events (e.g. researchers' night, open doors, health days for gymnasiums) are organised and joint events in collaboration with gymnasiums (e.g. a practice week for the medical pathway students of Tamme gymnasium) take place in the study rooms of the college at the time when the rooms are less occupied as the college students are having their practical training. The skills labs are used by students for independent practising and for data collection for their final theses. The evaluation results of the study and working environment at the college are high from the learner and staff perspectives (on the average, 90% of the college staff members are very satisfied or satisfied with the skills lab and study rooms).

As of the end of 2018 there are 15 191 library materials at the library of the college. Due to opening the master's programme in HS and developing new master's programmes an access to research articles was extended in 2019 by subscribing, in addition to the EBSCO research database, also to CINAHL Plus with Full Text (including over 770 full-text journals) and Medline Complete (including over 1800 full-text journals) as well as to the database of eBook Nursing Collection (including over 600 e-books).

The information technology service is in operation at the college aimed to develop and coordinate the activities related to information technology. The programmes and information systems in use are available on the THCC intranet.

Internal and external communications of the college and image-building

Communications management of the college is described in the quality manual (in Est.). To promote the internal and external communications of the college the position of the communications manager was created in 2013 and the communications strategy of the college was drawn up, the recommendations of which have been mostly implemented by now. A substantial review and revision of the strategy is planned to be carried out in 2020.

In 2013 the college website was re-designed, the publication of a web-magazine *Tervist!* (in Est.) was started, and the provision of services to the community was extended (chapter 3.12.). In November 2017 an updated website of the college was implemented with an aim to ease an access to the information with the help of a 3-level menu. The re-designed website is more modern, catching the sight of the visitors with a video on the front page giving an overview of the college.

The internal communication of the college is performed by means of the intranet, the study information system (hereinafter *SIS*) and information screens in the study building, serving as an environment for information exchange and communication for the staff as well as for the learners. The intranet includes all the documents directing and regulating activities of the college including also forums that give an opportunity to discuss on current topics. In addition, the essential current information of the college is provided on separately functioning screens, enabling the displaying of different information. The means of external communication of the college involve the website,

Facebook, the college web-magazine *Tervist!*, participation in fairs/conferences, various information leaflets, articles in newspapers/journals etc. The efficiency of the internal and external communications is regularly evaluated and the activities targeted to the public, media coverage (Figure 7) and other quality indicators are continuously monitored (in Est.) by the college.

Figure 7. Media coverage 2014–2018 (number of media reports)

In 2017 58 articles were published where a person related to the college served as an expert source; in 2018 this figure increased by nine articles focussing on the topics of health care and education. The college is an acknowledged partner in various sports events, safeguarding the tracks and providing first aid (Tartu marathon series, Student Days, Maamess etc.).

A good image of the college is evidenced by a high competition to vacant positions as well as by the feedback of the graduates. Results of the survey conducted among the graduates by the MoER in 2017 demonstrated that in choosing a higher education institution its image is considered important by 68% of the respondents from THCC (compared to 60% that was the average of other professional higher education institutions). On the average, 90% of the college staff members are very satisfied or satisfied with the image of the college.

Strengths:

1. The new study building comprising a high-level learning infrastructure with modern architectural design solutions and the renovated dormitory are supporting the achievement of the college objectives and ensure the learners with excellent conditions for daily studies and living;
2. The system for employees' rewarding and motivation as well as excellent opportunities for self-improvement.

Improvement area: a changed model of state activity support in higher education does not facilitate budgetary increase of a higher education institution with good performance indicators. **Planned improvement activity:** paying attention to the limitations of the state funding model and active explanation in order to ensure the sustainable funding of the college.

3.3. QUALITY CULTURE

Standard: **The higher education institution has defined the quality of its core and support processes, and the principles of quality assurance. In the higher education institution, internal evaluation supports strategic management and is conducted regularly at different levels (institution, unit, study programme), the findings of internal and external evaluations are analysed and quality improvement activities implemented.**

The development and introduction of the quality system at the college was commenced in 2003 based on the EFQM system. The processes of the College are described in the quality manual (in. Est). The principles for the quality assurance system of the college have been developed and identified, the core and support processes have been described; the review and revision is conducted each year in collaboration with the persons responsible for the processes.

Each described process starts with an input and ends with and output, including the identification of the objectives, activities, responsible persons, indicators, measuring instruments and references to the documents related to the processes.

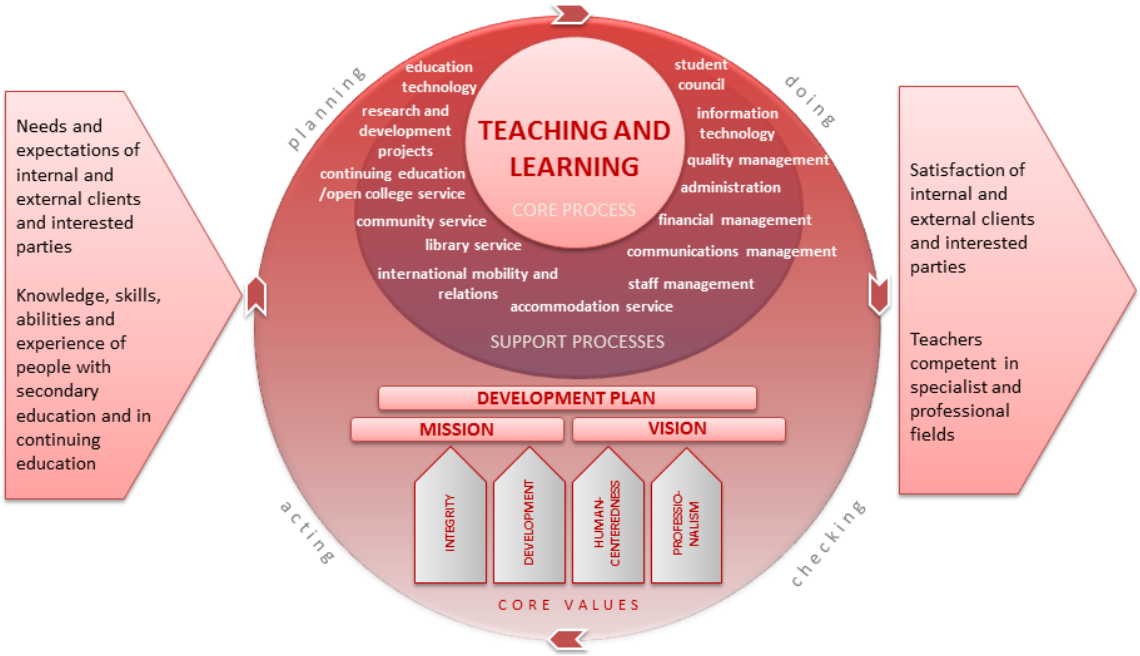


Figure 8. Process of quality management

The quality management system of the college is following the principle of the Deming cycle (plan-do-check-act) (Figure 8). The effectiveness (the achievement level of the objective) and efficiency (the ratio of output to the resources spent for its achievement) of the college activity is expressed by doing the right things in the right way. Internal evaluation is targeted to the development of the college by identification and implementation of the improvement opportunities. A narrower objective for internal evaluation is predominantly the involvement of a lot of people, as well as the implementation of their creativity and energy for the development of the college. Participation in internal evaluation provides people with a common language and communication opportunity, facilitating the development of common understanding about the vision, mission, and short-term objectives and long-term objectives, including the role of each person in the attainment of the objectives. The participation also supports priority setting and forms a basis for the development of values at the college as well as for the development of self-consciousness. All together we are looking for answers to the questions like – What are we doing? How well are we doing it? What could we do better? How could we do it better?

Internal evaluation is conducted by the college at different levels (college, units, curricula):

- throughout the year – visiting the lectures and seminars conducted by colleagues, visits to the practice bases, feedback by the supervisors of practical training;
- annually – analysis of development interviews with staff members, analysis of the working time of the teaching staff, evaluation of the teaching staff, elections of *the Colleague of the Year* and *the Teacher of the Year*, preparation of annual reports, conduct and summarising of the satisfaction surveys, data collection about the indicators and analysis of the key outcomes, analysis of auditing results, evaluation of the curricula, participation in projects;
- once after seven years – self-evaluation and preparation of documents for accreditation.

Comparisons with other higher education institutions are conducted, if needed. The quality working group of the RCUAS includes representatives from all member institutions (the quality manager of THCC); the working group collects and aggregates the data about the key indicators of professional higher education institutions. The data are used for the comparison between higher education institutions, but even more for supporting the common analyses and statements of professional higher education institutions (e.g. in budget negotiations, displaying and building the image of professional higher education. On 22 October 2018 a vision day (in Est.) was organised by the RCUAS in TTK University of Applied Sciences aimed at informing a wide circle of society and policy makers about the role of professional higher education and professional higher education institutions.

Internal clients as well as external clients form the interested parties of the college; the internal clients involve the employees and the learners and the external clients involve the enterprises, authorities, institutions, and persons that have needs and opportunities, interests and expectations in relation to the activities of the college.

Key partners of the college include the institutions/organisations that are related to the college in daily activities due to the content development as well as by financial operations:

- MoER – preparing the legislation regulating the activity of the college, the manager and main funding provider of the college;
- MoSA – making prognosis about the demands of the labour market, preparing the legislation regulating the fields of the curricula;
- Employers/practice bases – collaborating in curriculum development, identifying the needs of the labour market, functioning as practice bases, partners in projects and research, functioning as experts;
- Professional associations – collaborating in curriculum development, identifying the demands of the labour market, providing specialist in-service training;
- Higher education institutions – collaborating in the fields of study, research and development activities in Estonia and internationally.

Each year the college collects data about the quality indicators in four fields, in this report the analysis based on the quality indicators is given in four different chapters as follows:

- Management (analysis provided in chapters 3.2. and 3.3.): functioning of the quality assurance system, staff management, management of finances and the infrastructure;
- Studies (analysis provided in chapters 3.6.–3.10.): competition on the curricula, learning and teaching, organisation of studies;
- Research and development (analysis provided in chapter 3.11.): effectiveness of RDC, resources and support processes of RDC, supervision of student work;
- Service to society (analysis provided in chapter 3.12.): popularisation of RDC, in-service training, other activities targeted to the public.

Feedback forms an essential component of the quality assurance system in higher education; the information is collected from reports, satisfaction surveys of the interested parties and from observations and conversations. The surveys conducted at the college are aimed to get evaluations by relevant target groups on the activities and the general effectiveness of functioning and to identify the improvement possibilities and improvement areas.

Feedback collection (in Est.) includes data processing and analysis, the results of data analysis are presented in the rectorate, the pedagogical board, the curriculum boards, training courses or information days, briefings and on the intranet or by email. Improvement activities are recorded in the minutes of the decision-making bodies, planned and discussed with the persons responsible for

the process. In case of issues that are related to several fields, the activities are included in the action plan of the college.

Satisfaction surveys of the staff are conducted regularly (every two years). In 2014 the survey was responded by 45% of academic staff and 46% of non-academic staff; in 2016 – 53% and 72%; in 2018 39% and 52%, respectively.

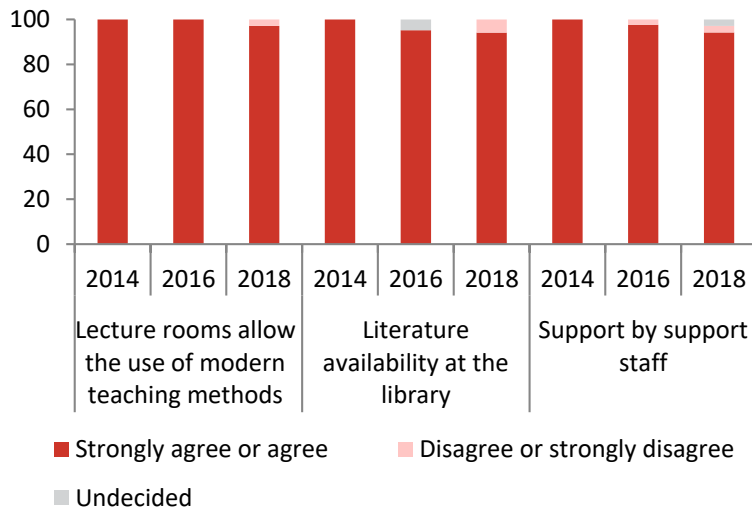


Figure 9. Staff satisfaction with lecture rooms, library and support staff (percentage of respondents)

In 2014, 2016 and 2018 staff satisfaction has been very high on a 5-point scale (quality indicators). Over the years, the employee satisfaction with colleagues, availability of specialist literature, self-improvement opportunities, study rooms and technical equipment has been high (Figure 9). That level has been maintained by recognising, motivating and engaging the colleagues; by planning funding for literature and learning aid investments; by planning and affording trainings.

In different years dissatisfaction has been expressed in relation to movement of information about the arrangement of the timetable preparation, resulting in the changes that are described in the chapter 3.6. In addition, criticism has been expressed, mostly by the academic staff, about the compliance of the wage rate with the work contribution (Figure 10).

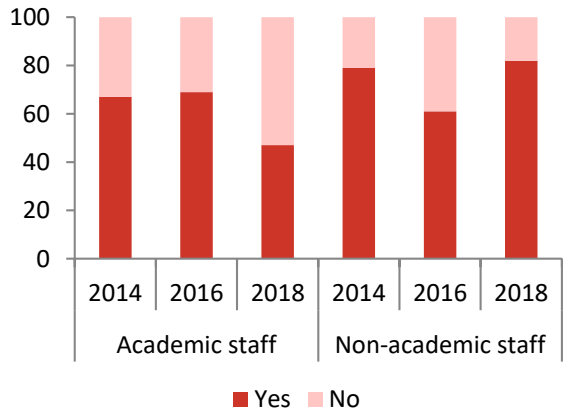


Figure 10. Employee satisfaction with the appropriateness of wages (percentage of respondents)

Correction of the wage rates according to the possibilities has been the priority of the college in recent years (the wage rate in the lecturer position: in 2014 – 1140 EUR; in 2015, I half-year – 1240 EUR, II half-year – 1340 EUR; in 2018 – 1440 EUR; in 2019 – 1540 EUR); in future the correction of wage rates will be focussed on according to the possibilities of the budget, but it should also be supported by general state funding of higher education (more details in chapter 3.2.)

Very high motivation and sense of mission among the employees of the college is evidenced by the fact that on average 97% of the academic staff and on average 92% of the non-academic staff, responding to the satisfaction survey in 2014, 2016, 2018, informed that they plan to continue their employment at the college, regardless of some dissatisfaction.

Strengths:

1. The college has a long-term quality system, of which the staff of the college is guided by and which is systematically developed;
2. Motivated and dedicated staff.

Improvement area: the publicising system of feedback results needs updating. **Planned improvement activities**: publicising the feedback results to different interested parties and the development of the publicising system.

3.4. ACADEMIC ETHICS

Standard: **The higher education institution has defined its principles for academic ethics, has a system for disseminating them among its members, and has a code of conduct including guidelines for any cases of non-compliance with these principles. The higher education institution has a functioning system for handling complaints.**

Understandings of academic ethics among the members of the college form a basis for the identification of ethical principles at the college. The college is aware of its responsibility for the development of ethical research and for the implementation of good research practices. In the study process, the principles of respect and caring, freedom and responsibility, honesty, objectivity and justice are emphasised, and collaboration and openness are encouraged that supports the development of professional identity of the leaners. Within the preparation process of the development plan 2015–2020 all teaching staff members participated in the formulation of core values of the college in 2014, including the development of common understanding about the conduct and communication practices at the college. The ethical principles identified at the college are in accord with the codes of conduct for professional fields and research.

The principles of academic ethics of the college support the development of professionally ethical conduct of the learners and its importance is emphasised continuously throughout the whole period of studies. Solutions of different ethical problems in the professional field (e.g. case studies) are integrated into specialist subjects supported by the development and implementation of diverse active learning methods (e.g. simulation based training). Feedback on and self-analysis of practical training includes also the aspect of professional ethics. In the first semester a confidentiality agreement is signed with all learners, i.e. both parties commit to the duty to maintain the confidentiality of data that become known to them in relation to practical training. The content of the confidentiality agreement is discussed with the learners in briefings as well as in the subject on ethics and in specialist subjects.

Due to the changes in society (digital studies, increasing use of social media etc.) there was a need for more specific identification and dissemination of the relations in the field of academic ethics, and in 2018 the concept of improper behaviour was revised and specified in the study regulations (by adding the violation of professional standards and academic fraud). The principles of academic ethics and prevention of corruption of the teaching and support staff are available on the intranet. The learners are aware of the need to follow the principles of academic ethics, paying the teachers' and fellow learners' attention to the non-compliance with the principles of academic ethics (e.g. cribbing). This is proving the fact that the core values are followed by the teaching staff as well as by the learners at the college.

The development of ethical attitudes and putting a value on the profession is also one of the areas focussed on in the analysis and development of the study process. For example, in 2017 a research study was started on student learning during practical training (*Learning and the factors influencing it*

during the internship); the interim analysis of research results demonstrates that ethical issues and dilemmas are not much discussed in a practice environment as the compliance with ethical principles is considered as something that goes without saying. But the learners say that they encounter complicated ethical situations during their practical training and on social media communication where they need more support in order to analyse and avoid similar cases.

Plagiarism prevention

The college has had a proactive attitude to the detection and prevention of plagiarism cases that has been highlighted as a good example in comparison with other higher education institutions in Estonia (P. Pärnapuu, article in Est.).

Plagiarism prevention is one part of the daily teaching process and the teaching staff members are aware that their activity serves as an example to the learners in the development of research-based approach and following the principles of good academic practices. From the first semester the learners are instructed to design their written papers in a required format and correct references form a mandatory part of all written papers. If needed, the learners are instructed on the use of plagiarism detection programs (Kratt, Urkund). Plagiarism cases and the issues of academic ethics are regularly discussed in the pedagogical board as well as in the department meetings. To conduct proceedings of the plagiarism cases an independent committee across the college has been established by a written order of the vice rector for academic affairs; the committee involves into a proceeding the head of the relevant study department and, if required, the person who detected the suspected plagiarism case and other persons related to the case. In identifying plagiarism all circumstances related to the case are investigated objectively and from all perspectives by the committee. The learner suspected in plagiarism is given an opportunity to explain his or her activity and defend at the committee; he or she is supported in finding solutions. Results of the survey conducted among the graduates in 2018 demonstrated that 88.6% of the respondents agreed that the curriculum structure and the subject courses completed support their preparation for the writing of a final thesis and their compliance with the principles of academic ethics.

In 2012–2015 all final theses of students were systematically checked by a plagiarism detection program *Plagiarism Detector*. In the conduct of proceedings of plagiarism cases in that period it appeared that the concept of plagiarism was interpreted in different ways, resulting in a need to revise and specify the explanation of the plagiarism concept in the study regulations as well as in relevant subject lectures and seminars. In 2012, the committee detected 12 final theses where plagiarism was suspected, in 2013 four final theses, in 2014 two theses and in 2015 one thesis. Due to a decreasing number of plagiarism cases and high awareness among the students and the teaching staff, it was decided to terminate the checking of all final theses in 2015 and substitute it with random checking. In the years 2016 and 2017 no student papers were submitted to the plagiarism committee; in 2018 two written student papers were submitted to the committee, both of which proved to be plagiarism.

In 2013–2018 in total 19 student papers with plagiarism suspicion were submitted to the plagiarism committee (incl. independent learning assignments and final theses), out of which ten turned out to be plagiarism and nine did not contain plagiarism. The plagiarism suspicion was mainly caused by the fact that some part of the thesis was carried out by students in collaboration (e.g. the section of research methods). The college has systematically and continuously prevented plagiarism that is also evidenced by a small number of plagiarism cases.

Management of challenges and complaints

The employees and learners of the college are aware of the challenge proceedings and the management of work-related problems at the college. The relevant process is described in the study regulations and in the rules of work organisation.

Proceeding of disagreements, proposals, inquiries and challenges related to the organisation of studies at the college are conducted in written form. To challenge the decisions related to the organisation of studies, the learner contacts first the person who made the decision and expresses clearly his or her intention to challenge the decision. Depending on the content of a challenge, it is resolved either by a teacher, the head of department or the pedagogical board of the college. If a learner does not agree with the results of final exam or the defence of final thesis he or she has the right to submit a written appeal to the head of the relevant study department within one working day from the announcement of the assessment results. The head of the relevant study department in collaboration with the chairperson of the defence committee and the chairperson of the final exam committee reply to the appeal within three working days. If the person who challenges does not agree with the decision, he or she has the right to adress the vice rector for academic affairs who resolves the challenge alone or in the pedagogical board. The vice rector for academic affairs has the right to involve in the proceeding of the challenge the members of the student council and other persons significant in the particular matter.

In 2016–2018 there were 13 challenges by learners registered at the college, including nine appeals in relation to the grades of final theses. In one case, expert assessment of the final thesis was organised by an independent committee based on the request of the student; based on the proposal of the committee the result of the final thesis was increased by one grade. In one case a student disagreed with the decision of the defence committee and submitted an appeal to the vive rector for academic affairs who resolved it in the pedagogical board. In three cases members of Tartu city have turned to the college, because in their opinion a learner of the college violated a patient's privacy by posting a photo, video or message on social media. In two cases the accusation was groundless and the posted items were not related to patients, nevertheless, the given cases demonstrate clearly the high expectations related to the conduct of health care students.

The ethics committee has been established at the college to solve ethical issues. The membership of the committee has been approved and the rules of procedure developed (available on the intranet). In recent years no cases have been submitted to the committee, all matters have been resolved at the levels of the rectorate or the departments. In case of work matters the employees generally apply to their direct supervisor. In case the problem is not solved, the rectorate is addressed orally or in writing, incl. electronically. In this case, the solution and a reply to the employee is organised by the rectorate. The work culture at the college is open and the employees have always an opportunity to address directly the members of the rectorate.

In 2014–2018, two to five proposals or complaints have been submitted by the staff members each year to the rectorate. The complaints have mainly been related to the working environment or equipment and all complaints have been solved. For example, in case an employee estimates his or her workplace as too noisy or too draughty, a place in another room is found for the employee. If required, assistants for fixed term are provided to the staff members whose workload is temporarily increased to a considerable extent due to the organisation or conduct of major events, e.g. assistants to the continuing education specialist and the communications specialist in relation to the organisation of the jubilee of the college. Within that period only one workload case has been under discussion in the rectorate; that case was solved by decreasing the employee's workload in agreement with the employee. Lack of study rooms has been highlighted and a need to find solutions at the level of the rectorate; these issues are solved quickly and appropriately. For

example, this year it is planned to start the construction of additional study rooms in the dormitory, using the area of un-renovated rooms.

Strengths:

1. Professional ethics is integrated with academic ethics throughout the whole process of studies;
2. Management of cases of improper behaviour is open and clear, and a learner is supported in the occurrence and solution of ethical problems;
3. High awareness and appreciation of academic ethics among the teaching staff and the learners has resulted in reduction of plagiarism cases;
4. The college has a functioning system for the management of complaints and proposals, and the learners and the staff members are informed about the system.

Improvement area: The core values and the principles of academic ethics have been agreed upon in the preparation of the development plan 2015–2020 five years ago; they need to be reviewed and revised considering the changes in society. **Planned improvement activities**: To plan discussions on core values within the preparation process of next development plan. Development of good learning and teaching practices of the college in collaboration with the learners and the teaching staff. **Improvement area**: Results of research study Learning and the factors influencing it during the internship demonstrate that the learners have a need for more support in order to cope with ethical problems and dilemmas that occur within their studies. **Planned improvement activity**: Based on the research results, to analyse and develop ways for more effective support of the learners.

3.5. INTERNATIONALISATION

Standard: **The higher education institution has set objectives for internationalisation and assesses the attainment of these objectives regularly. The higher education institution has created an environment that encourages 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.**

An objective of the college for internationalisation is to share best practices and experience, improve the quality of teaching, learning and research and increase the international competitiveness of the college. Each year activities are planned by the college based on the development plan in order to promote internationalisation and support mobility. The organisation of mobility of the learners and the teaching staff is described in *Erasmus Plus International Mobility Regulation* (available on the intranet). Internationalisation is one of the priorities of the college established in the development plan 2015–2020. Internationalisation-related activities are set in annual action plans and their attainment is assessed by the college.

Internationalisation in the development of learning, teaching and RDC activities

Development of the curricula in international collaboration ensures the graduates' competitiveness in the European labour market, facilitates the acquirement of multicultural and professional competences. The college has good and long-term collaboration relations with several higher education institutions abroad; in 2016–2018 collaboration agreements were signed with eight higher education institutions abroad to develop professional higher education curricula and master's programmes. The international dimension of the study process is ensured by participation in international networks and projects as well as by the use of study literature and databases in a foreign language and the involvement of international lecturers in the volume of 10 to 27 ECTS credits each year. Teaching and learning in international collaboration is carried out within

mandatory specialist subjects on the curricula as well as in elective subjects courses meant for all learners of the college.

Examples of learning and teaching development in international collaboration in recent years:

- From 2017 collaboration takes place with an international study group of the N curriculum at Jyväskylä University of Applied Sciences in the implementation of health promotion projects in the first study year. On 06.–10.05.2018 two teachers and 12 students were involved in an international intensive course in Jyväskylä dedicated to the implementation of health promotion projects. In May 2019 students from Jyväskylä visited THCC and the health promotion projects are implemented in collaboration for the fifth grade pupils of Tartu city;
- An interprofessional course on podiatry and on the topic of digital solutions have been organised within a project *The Developer of Digital Health and Welfare Services.* Extension of opportunities for joint learning and teaching of certain topics is planned in future in order to enrich the learners' experience of international and interprofessional learning and teaching.

A considerable number of teachers are engaged in international development projects. For example in 2018:

- The college was leading the implementation of one international development project (*The eMedication Passport – cultural adaptation of learning tool for ensuring the development of medication competence of graduate nurses*) and participated successfully in the implementation of seven other international development projects;
- The international *EBreast* project led by THCC was completed (*Education and training in early detection of breast cancer for health care professionals 2015–2018*); within this project three research studies were carried out, nine presentations were made in international specialist congresses in addition to the presentations in national specialist conferences. Three e-learning modules were created and five articles were published in international peer-review journals in the course of the project.

Participation in collaboration networks and associations and in international development projects is directly related to the development and implementation of the curricula and attainment of the objectives of the college. For example, in 2018 the college joined a network *Advanced Practice Nursing Nordic Baltic Nordplus* with an aim to develop a master's programme in HS. The college staff members have wide experience of participation in international projects and management competence of international projects to be used in relation to initiation of new international projects in planning next development plan.

In the development plan, the college has set target levels for the year 2020 in relation to the following indicators: the proportion of staff involved in international mobility, the number of presentations in conferences/seminars abroad, and the number of teachers participating in collaboration networks. As of 31.12.2018 the college had exceeded the target levels for the staff involvement in international mobility (target level 60%, attained level 67.4%) and the teacher participation in collaboration networks (target level 25, attained level 27). The target level for the presentations in conferences/seminars abroad is 30 presentations per year; as of 31.12.2018 the level attained was on the average 16 presentations per year, excluding the presentations made in collaboration networks, association seminars and workshops.

In recent years the number of work-related travels abroad by the staff has considerably increased in relation to active international activity and due to the support of the Erasmus+ and other mobility programmes (Figure 11), reaching the level that is optimal for the attainment of the set objectives of the college. The number of Erasmus+ partners visiting the college has been different in recent years

(on the average, 11 lecturers per year); in addition, the resources of international projects, networks and other possibilities are used for mobility purposes by the international visitors.

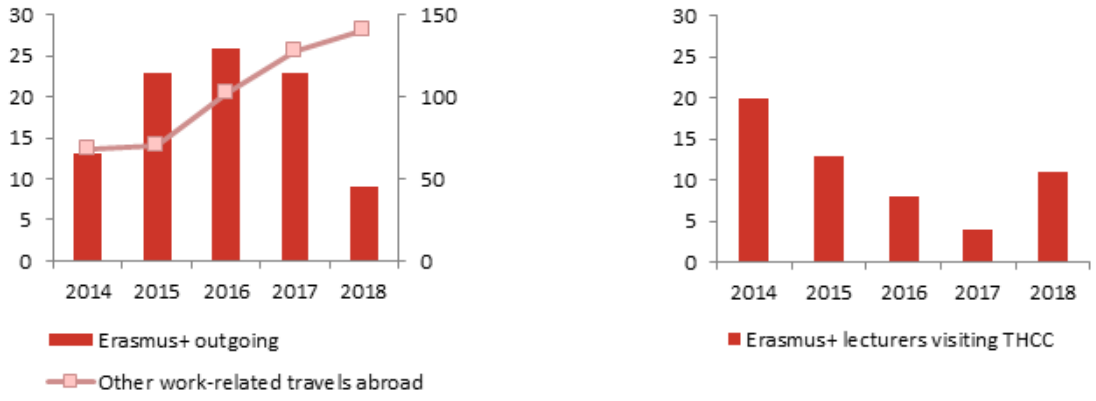


Figure 11: Staff mobility, number of work-related travels abroad in 2014–2018 (on the left) and number of Erasmus+ lecturers visiting THCC (on the right)

International weeks

To popularise the college and promote international collaboration, the college has set an objective to organise at least three international weeks within the period of 2015–2020. By the end of 2018 the college had organised three international weeks; it is planned to introduce a tradition to organise an international week in the same week with the college anniversary.

Examples of activities conducted within international weeks:

- The topic of an international week in 2015 was related to the supervision and learning of international students in a multicultural environment; the week was participated by 22 international visitors;
- The topic of an international week in 2016 was *Applied research and collaboration across borders*; the week was participated by 28 international visitors;
- The topic of an international week in 2018 was *Patient safety*; the week was visited by 16 international colleagues who took also part in the international scientific conference *Healthy knowledge in healthy body* organised by the college.

In 2017 the first international student conference was organised by the college (see also chapter 3.11.) that is definitely important for supporting the research capacity of the students and for the development of international collaboration and multicultural competences.

Student mobility

According to the development plan, the student mobility indicator should reach on the average 6% of the student body by the year 2020, and each leaner should have international experience. Within last three years the college has been leading three mobility projects (one in professional higher education and two in vocational training).

3% of professional higher education students take part in long-term mobility as of 31.12.2018. One of the challenges in supporting long-term mobility of professional higher education students is that for family and permanent employment reasons they cannot be away from home for a long period; and the Erasmus+ grant is not always sufficient for covering the costs of living abroad. On the average, 6% of vocational training pupils have participated in learning mobility within last three years. Mobility increase among the vocational training pupils is supported by better funding and a shorter period to be spent abroad.

To provide the learners with international learning experience and develop the curricula the college has developed long-term mobility and additionally searched actively opportunities for promoting short-term mobility.

Examples:

- In 2016–2018 students took part in six international intensive courses; in addition, 27 students took part in international conferences, seminars, contests; 36 students participated in the activities of international development projects;
- From 2017 an international elective subject *Podiatry* (1 ECTS credit) is organised in collaboration with P.P. Stradins Medical College of the University of Latvia for the students of both higher education institutions; the elective subject course is very popular among the students – in 2017 the course was participated by 98 students and 3 teachers from both institutions, and in 2018 – 88 students of the college;
- To support student internationalisation students from N and MW curricula have been provided with an international learning experience within their studies since 2015. For this purpose an individual internationalisation plan is drawn up by a student within a first year subject course *Self-direction*, taking into account different internationalisation opportunities available at the college.

Erasmus+ opportunities are most often used for the organisation of student mobility (Figure 12), although the possibilities of different networks, collaboration projects as well as the resources of the college are also used for this purpose. As of the year 2018 the college has over 70 Erasmus+ partner schools that is sufficient for the organisation of mobility. The college is an attractive collaboration partner for higher education institutions abroad and the number of international students willing to perform their practical training in Estonia exceeds the capacity of the college practice bases to take in international students. An objective of the college is to continuously monitor and evaluate the mobility indicators in order to have agreements, according to which appropriate and high quality exchange is ensured for both parties. Gradually a balance has been achieved between the numbers of incoming and outgoing students, with a steadily growing number of outgoing students.

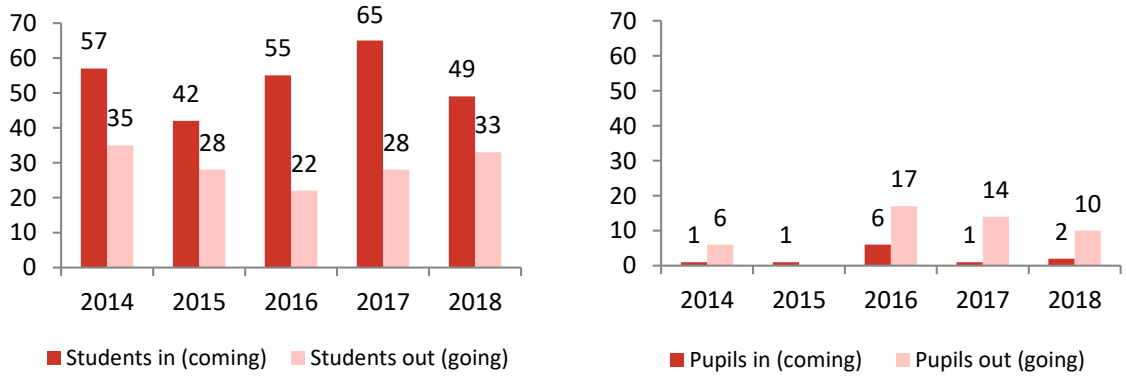


Figure 12. Participation in long-term mobility of professional higher education (Erasmus+) (on the left) and participation in international learning mobility by vocational training pupils (on the right)

In 2014–2018 the mobility of vocational training pupils was organised within the mobility projects; the mobility project proposal in 2015 was not funded and for that reason the pupils were not involved in mobility in that year.

The international relations specialists support the process for going to practical training or study abroad by informing about and explaining regularly the mobility opportunities during briefings and

helping the learners, who are interested in mobility, to find a suitable partner school; they communicate with the coordinator at the partner school in relation to exchange issues. The coordinator at the college helps also the learners who are having their practical training/studies abroad to solve the problems occurring within their mobility.

Practical training/studies passed by the learners abroad are recognised equally with their practical training/studies passed in Estonia, taking it into account as part of the curriculum completion. Practical training and studies abroad can also be chosen as elective or optional subjects.

Examples of research and development activities promoting student mobility:

- To support practical training of incoming international students, and promote the preparation of supervisors of practical training the college took part in project *Building Social Capital by Improving Multicultural Competence in Higher Education and Labour Market (SOULBUS)* (2013–2015). Based on the project outcomes the programme for training supervisors of practical training was improved by adding a module on multicultural competences;
- In 2017–2018 a global learning mobility project was led by the college that included a research study *Students mobility and the factors affecting student mobility* that was carried out in international collaboration. The purpose of the study was to identify the facilitating and inhibiting factors of student mobility. The number of students participating in the study was 320, incl. 264 students from THCC. Results demonstrated that long-term mobility is inhibited the most by family or other personal reasons as well as by financial reasons. The results of a national survey conducted among the graduates in 2017 showed that costs related mobility is an essential obstacle (70% of the respondents), as well as separation from close ones (67%) and employment during the studies (51%) (unpublished data);
- In 2013–2015 the college participated in an international project *Ready Study Go Around Europe* (RSGAE); the outcomes of the project provide an online opportunity for learning a foreign language in the field of health care, including Estonian, Swedish, Finnish, Spanish and Italian, but also, for example, Turkish.

Strengths:

1. Continuous international collaboration in the attainment of the objectives of the college;
2. The college is a partner in international networks and projects and a popular location for passing practical training;
3. The learners are provided with diverse opportunities for gaining international experience.

Improvement area: Increasing the number of students participating in long-term mobility on professional higher education curricula. **Planned improvement activity**: Planning supporting improvement activities on the basis of the results of the study on inhibiting and facilitating factors (in action plan for 2019). **Improvement area**: Extending opportunities for interprofessional and international learning experience. **Planned improvement activities**: Development of international subject courses and curricula, organisation of international conferences and workshops.

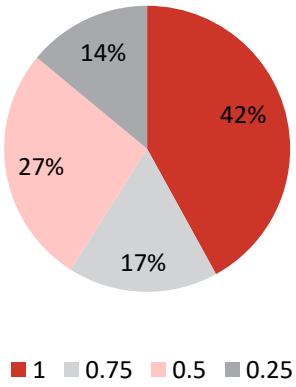
3.6. TEACHING STAFF

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 self-development.

Membership of teaching staff, their educational levels

The number of the qualified teaching staff members employed by the college is sufficient for the attainment of the curricula objectives and achievement of learning outcomes, as well as for ensuring

the quality and sustainability of teaching and learning. As of 31.12.2018 the number of academic staff positions open at the college was 72 (incl. 66 teaching positions, four heads of study departments, the rector and the vice rector for academic affairs). 63.75 teaching positions were filled by 88 persons. Due to increased admissions, development of new curricula and opening the competence centre, three additional academic positions have been created within last five years (in 2015 – 67 positions filled by 77 persons).



42% of the teaching staff work at the college full-time (1.0) (Figure 13), 58% of the teaching staff members are employed by the college and by a health care institution or some other organisation. For example, a half of the teachers on the radiography curriculum work at the college with 0.25 workload. This kind of teaching staff membership ensures the college with teachers who have excellent competence in their professional field.

Figure 13. Teachers' workload at the college

Due to opening of master's studies in HS more and more experts in the field have been engaged in the conduct of teaching and evaluation committees; they are employed on the basis of authorisation agreements (in 2014 the number of authorisation agreements was 299; in 2018 – 345). In relation to opening of the master's programme in HS a professor's position (1.25 workload) was created in the nursing and midwifery department in the spring of 2019; from 01.05.2019 this position is filled by a visiting professor (0.5 workload) from the United Kingdom. International lecturers are recruited by the college by using own funding as well as the resources of the ASTRA programme. Due to the development of new curricula and the increase of admissions there is a need for creating additional teaching positions; the professor position (0.75 workload) is planned to be filled in 2019/2020.

The college values and supports lifelong learning of the teaching staff and their participation in formal education. As of 31.12.2018 there were 11 teaching staff members with a doctoral degree (12.5%) that is in the second place in comparison with other professional higher education institutions (Figure 14).

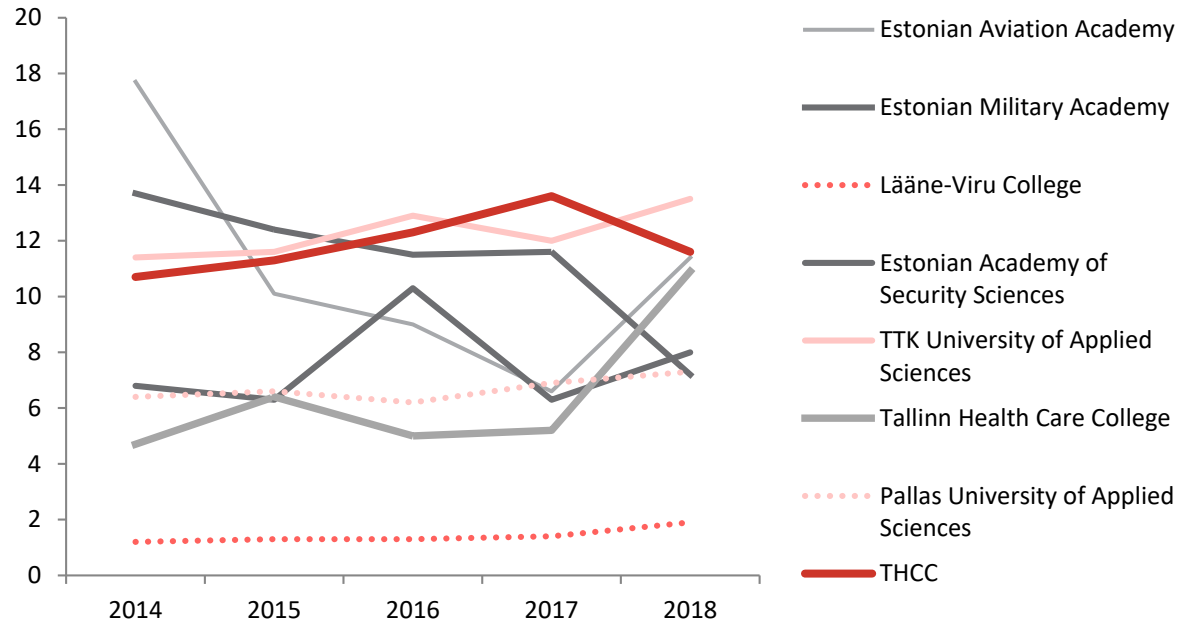


Figure 14. The proportion (%) of teaching staff with PhD in professional higher education institutions*
*HaridusSilm

In 2018 the motivation and rewarding system for the teaching staff at the college was revised regarding the possession of a doctoral degree or a master's degree. From 01.01.2019 the wages of a teaching staff member with a doctoral degree is higher compared to the staff member without a doctoral degree in the same position. As of 31.12.2018 eight teaching staff members (9%) were engaged in doctoral studies and seven members (7%) in master's studies.

Recruitment of teaching staff
Teaching staff positions are filled each spring based on an open competition. More than two candidates have been standing for one teaching position over the years (see quality indicators). In the spring of 2019 a competition for teaching positions was almost two times higher compared to previous years – 48 applicants to 9.75 positions, demonstrating that practitioners with a narrow specialisation are interested in sharing their knowledge and skills with students and put a value on teaching at the college. Regardless of a high competition rate in general, some positions were not filled, e.g. a midwifery lecturer (0.5) and a mental health nursing lecturer (0.5). The college has solved the situation by inviting lecturers in a narrow specialisation field to take on a small teaching load based on an authorisation agreement; filling the teaching positions with staff members whose principal job is teaching is continuously one of the priorities of the college.

Planning teachers' working time and supporting their self-development
Planning of teachers' working time is described in the document *Planning the workload of academic staff* (available on the intranet). Planning of teachers' working time is transparent and flexible, taking into account the development objectives of the college and individual needs of a teacher. Organisation of the teaching staff work is flexible and remote working is and option, if it is a teacher's wish. In 2018 the division of teachers' working time was analysed, resulting in the revision of workload planning of academic staff with an aim to specify the length and proportion of time meant for the duties determined in the job description. Working time of a teacher includes the activities related to teaching as well as the research and development related to teaching; activities supporting the self-development of a teacher (incl. 40 hours for self-improvement per full-time

teacher). To support the participation in doctoral studies, up to 120 hours can additionally be planned for self-improvement in case a full-time teacher is engaged in doctoral studies.

The division of working time is planned for a teacher in collaboration with the head of department within a development interview; before the beginning of an academic year a teacher has an opportunity to make proposals for specification of their duties. In the course of an academic year the head of department in collaboration with a teacher analyse the duties and the factors that may influence the fulfilment of the duties, making corrections and revisions, if needed. Training needs of a teacher are also planned in the development interview based on their duties and needs for personal and professional development. As one of the priorities of the college is the development of active learning methods, continuous training on teaching and learning methods is considered essential. In addition to individual trainings, joint trainings are organised for the teaching staff (e.g. on the topics of corruption, interaction with journalists, teaching and learning methods etc.). In 2016–2018 13 joint trainings were organised for the teaching staff (incl. six trainings conducted by international lecturers) in addition to regular trainings on digital studies.

In 2017–2018 the resources of the ASTRA programme were used for the engagement of international lecturers in the conduct of training for the teaching staff, making it possible to organise high-level trainings on teaching and learning methods (e.g. simulation based training) in total volume of 56 hours. The teachers involved in teaching of practical skills have an opportunity to have training in a working environment (for 40 hours); in 2018 this opportunity was used by nine teachers in total volume of 546 hours. The teaching staff members have an opportunity to apply for a free semester in order to promote their professional skills or for creative work in cases that are in accord with the objectives of the college: e.g. development/publication of a learning aid or material, master's or doctoral studies abroad and research/training in a working environment/self-improvement in a foreign country. In 2020, for the first time the evaluation of the teaching staff members will take place according to the evaluation system.

The teaching staff members are highly evaluated by the learners. Results of satisfaction surveys conducted among the learners demonstrate their satisfaction with the acquirement of theoretical specialist knowledge and practical skills, as well as the implementation of skills in practice is constantly evaluated as 4.0–4.3 (on a 5-point scale). Results of a survey conducted among the graduates (by the MoER in 2015) show that the graduates of the college are satisfied with the levels of the teachers and teaching (completely agree or agree – 79%) and with supervision (completely agree or agree – 77%).

Teachers-experts

High professional competence of the teaching staff is evidenced by their participation in working groups and networks (in Est.) in Estonia as well as internationally. Based on the data collected on the intranet of the college, 47 teaching staff members of the college participated in national working groups and 71 members belonged to different specialist and other associations in the year 2018.

The college has developed its competences in particular fields. **For example** in the field of immunisation:

- The college is one of the four institutions in Estonia that is accepted by the ministry of social affairs to conduct continuing education training on immunisation. A syllabus of *Basic training on immunisation* (2 ECTS credits) that is approved by the immuunoprophylaxis committee serves as a basis for the conduct of an elective subject course for final year nursing and midwifery students and an in-service training course for practising specialists;
- A teacher of the college has been invited to investigate the topic of immunisation in a working group formed by the ministry of social affairs;

- In 2018 the final thesis *Parental beliefs and behaviours towards vaccination in Estonia* by our graduate was recognised the best bachelor thesis in the field of health studies by the Estonian Academy of Sciences;
- Six video films and 14 video lectures have been created on the topic of immunisation.

Examples in the field of dementia:
- In 2018 the college joined the competence centre on dementia that is aimed at the improvement of coping among persons with dementia and their close ones;
- From 2018 support group meetings are organised for the informal carers of persons with dementia as a service to community taking place once a month.

Examples of participation by the teachers as experts in the field:
- Teaching staff members of the college participate regularly in the supervision, reviewing and assessment of master's theses at the UT;
- Two teachers participate regularly in the work of the Estonian Guideline Advisory Board;
- Teachers of the college have participated in the development teams of all the professional standards that are related to the curricula at the college;
- Participation in the work of different national working groups (national nutritional recommendations working group etc.

Pedagogical and specialist competence of the teaching staff is evidenced by the awarded national recognitions in recent years:
- In 2018 the title *the Teacher of the Year 2018* (in Est.) was awarded to a teacher of the college Merle Kolga by a committee of the MoER. The MoER recognises each year the educators and supporters of education whose work within last three years has served as an example, who contribute to supporting the development of learners, collaboration and in the implementation of a new learning approach in educational institutions;
- In 2018 a teacher of the college Evelin Gross was awarded the title *the Midwife of the Year* (in Est.): the title is awarded by the Estonian Midwives Association (hereinafter *EMWA*) to the midwife who is distinguished by her professional activity.

The majority of the teaching staff participates in the promotion of internationalisation, community service, research and development activities of the college that are described in details in chapters 3.5., 3.11., and 3.12. Within last five years the teaching staff members have participated in the publication of nine textbooks and other learning materials (categories 2.4. and 6.2. in Estonian Research Information System (hereinafter *ETIS*). In addition, the learning material for training of supervisors of practical training has been compiled.

Strengths:
1. The membership and high competence of the teaching staff is optimally used for the attainment of objectives of the college;
2. Specialists in the field participate in the conduct of teaching;
3. The teaching staff members are nationally and internationally recognised experts and developers in the field.

Improvement area: To attain the objective of the college it is necessary to pay continuously attention to the increase of the proportion of teachers with a doctoral degree and creation of professorship **Planned improvement activity**: Analysis and creation of professor positions; filling the positions. **Improvement area**: Unfilled teaching positions requiring specialist preparation in the field that are needed for the implementation of curricula. **Planned improvement activities**: Recruiting

international lecturers. Collaboration with other higher education institutions in the conduct of teaching and learning.

3.7. STUDY PROGRAMME

Standard: **Study programmes are designed and developed while 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 competences.**

General characterisation of curricula at the college

Six professional higher education curricula, one master's programme (Table 6) and five vocational training curricula (Table 7) are open at THCC. In 2016–2018, the master's programme in HS and two new vocational training curricula (CWMHP and MAS) were opened at the college.

Table 6. General data of higher education curricula at THCC

NAME AND CODE OF CURRICULUM*	QUALIFICATION LEVEL EQF	VOLUME AND DURATION OF STUDY	VOLUME OF PRACTICAL TRAINING	OPENING YEAR OF CURRICULUM	NAME OF THE HEAD OF CURRICULUM
Nursing (2296)	Level 6	210 ECTS credits (3.5 years)	90 ECTS credits (43%)	At the level of higher education from 2002	Saima Hinno
Specialised nursing (80303)	Level 6	60 ECTS credits (1 year)	15 ECTS credits (25%)	2006	Saima Hinno
Midwifery (2297)**	Level 6	270 ECTS credits (4.5 years)	106 ECTS credits (39%)	At the level of higher education from 2002	Saima Hinno
Physiotherapy (2290)	Level 6	180 ECTS credits (3 years)	50 ECTS credits (28%)	2001	Anna-Liisa Tamm
Environmental health specialist (2305)**	Level 6	180 ECTS credits (3 years)	39 ECTS credits (22%)	2002	Anna-Liisa Tamm
Biomedical laboratory science (2304)**	Level 6	210 ECTS credits (3.5 years)	44 ECTS credits (21%)	2000	Zinaida Läänelaid
Radiography (2301)	Level 6	210 ECTS credits (3.5 years)	64.5 ECTS credits (31%)	1999	Zinaida Läänelaid
Health sciences (194257)	Level 7	90 ECTS credits (1.5 years)	15 ECTS credits (17%)	2018	Saima Hinno

* EHIS

** Included in the sample for institutional accreditation

Table 7. General data of vocational training curricula at THCC

NAME OF THE HEAD OF CURRICULUM TIINA UUSMA						
NAME AND CODE OF CURRICULUM	**QUALI-FICATION LEVEL EQF**	**VOLUME AND DURATION OF STUDY**	**VOLUME OF PRACTICAL TRAINING**	**STUDY PROGRAMME GROUP**	**OPENING YEAR OF CURRICULUM**	**FORM OF STUDY**
Care worker (134861)	Initial vocational training, level 4	120 ECVET (2 years)	30 ECVET (25%)	social work and counselling	2000	full-time school-based study
Client worker for people with mental health problems (151901)	Initial vocational training, level 4	60 ECVET (1 year)	15 ECVET (25%)	social work and counselling	2016	full-time school-based and workplace-based study
Emergency medical technician (134857)	Initial vocational training, level 4	60 ECVET (1 year)	21 ECVET (35%)	medical diagnostic and treatment technology	2015	full-time school-based study
Childminder (141177)	Initial vocational training, level 4	60 ECVET (1 year)	15 ECVET (25%)	child care and youth services	2006	full-time school-based and workplace-based study
Masseur/masseuse (143157)	Initial vocational training, level 5	120 ECVET (2 years)	35 ECVET (29%)	therapy and rehabilitation	2016	full-time school-based study

* EHIS

Education at the level of professional higher education is provided at the college from 2002. As of the spring of 2019 the college has the right to award the profession in relation to all vocational training curricula. In professional higher education the college has the right to award the profession on the curricula of MW and PT.

Studies at the college are mostly conducted in Tartu, although the college is ready to organise teaching in other locations across Estonia based on the needs of regional policy. Until 2016, nursing training with a shortened period for the nurses with former vocational education were organised by the college in collaboration with health care institutions in Estonia (Viljandi hospital, Järvamaa hospital, Rakvere hospital, Jõgeva hospital); from the academic year 2016/2017 this training was closed due to a decreased need for it. From the academic year 2018/2019 there is no admission to the curriculum of specialised nursing as these studies have been developed into a master's programme in HS. The presence of a group of vocational training curricula at the college adds value to the quality of teaching and learning – a capability to assure the teaching quality for the group of vocational training curricula with the help of the higher education teaching competence in the related fields.

The curricula at the college are based on outcomes, following the principles of constructivist approach to learning described in the lifelong learning strategy. General learning outcomes of the curricula are in accord with the learning outcomes for the professional higher education level

determined in the higher education standard as well as with the source documents of the curricula. The N and MW curricula meet the requirements of the EU directive; the objectives and the content are in accord with the framework requirements established by regulation of the Government of the Republic (in Est.). Other curricula at the college are in accord with and based on international standards as there are no European directives directly regulation the fields. The curricula and the study information are available on the college website and in the SIS. The procedure for opening, administration, changing, evaluation, quality assurance and closing of a curriculum as well as the concepts and structure of the curricula are described in the statutes for curricula. The documentation regulating the studies (e.g. the study regulations, the procedure for practical training is up-to-date and relevant, the feedback system and the implementation of improvement activities support the quality assurance of studies.

The studies are organised according to the course-system based on modules. The curricula are built on the implementation and deepening of prior knowledge and skills in the study process, a student has an opportunity to implement their acquired knowledge and skills in pre-clinical practicums as well as in a practical work situation and reflect on their own performance and development in the course of the study process. Interconnectedness of the theoretical studies and practical training support the development of a learner, and reflection on the experience give an opportunity to set goals for further development. The development of general competences (e.g. self-direction and development, management and entrepreneurship, communication and teamwork, internationalisation, ethics etc.) of learners is integrated into different modules of the curricula.

Curriculum development and quality assurance

In 2016 the college passed successfully the quality assessment of the study programme groups conducted by the EKKA. The development of the curricula and the conduct of studies are based on the objectives established by the development plan 2015–2020 of the college and other strategic documents as well as on the information and experience gained from the participation in international networks, projects and research studies. The college collaborates daily in curriculum development and research with several organisations and institutions in accord with the needs of the labour market and the legal acts. For the evaluation, development and quality assurance of a curriculum, the curriculum boards have been approved by a directive of the rector. The boards include the representatives of teachers, employers, professional associations and students of the relevant curricula at the college. For the creation of the master's programme in health sciences a joint working group-programme board was formed in 2017, involving in addition to the representatives of THKK and the ENU also the representatives of the employers and the graduates. A close contact with the employers gives an opportunity to be informed of a need for changes, ensuring a flexible development of curricula that meet the needs of the labour market.

All teaching staff members are engaged in the development of the curricula. The teachers in charge for modules form a curriculum development team that analyses regularly the curriculum and makes proposals to the curriculum board about the changes to be introduced. According to the statutes for curricula, each year changes can be made to the curricula. Before making any changes, internal evaluation of a curriculum is carried out and the changes have to be approved by the curriculum board and the pedagogical board at the college; major changes to a curriculum are adopted by the college council. Within last three years all professional higher education curricula have been revised based on the legislation, recommendations of external evaluation, changes in the organisation of studies, student feedback, needs of the labour market and the learning approach for lifelong learning strategy (see major changes to curricula in 2016–2018).

The college analyses continuously and takes into account the learner feedback on curriculum development. Twice a year feedback on curricula is obtained from the graduates. Evaluation results

of the curricula by the graduates are high. For example, according to the evaluation of two last year graduates the structure of the curriculum is logical supporting the achievement of learning outcomes (on the average 72% of the respondents completely agree or agree) and making possible the achievement of competences required for professional activity.

Examples of curriculum development based on learner feedback:

- On the N curriculum, practical training *Geriatric nursing care* was transferred from the third study year to the second study year as the student feedback showed that they have encounter with geriatric patients during their practical training in the second year;
- To support the training of practical skills a system for independent training in the skills labs was created where a learner can book time for the use of a lab and equipment for independent training;
- Opportunities for re-watching and re-listening of recorded lectures were extended (e.g. Vaccination).

Examples of curriculum development based on research results:

- Competences regarding the field of pharmacology are being more developed on the N curriculum based on the results of a research study *The drug related knowledge and skills of second and fourth year nursing students in Tartu Health Care College* to ensure better coping of the graduates and the compliance with the requirements of the labour market.

The curricula at the college and the study process provide comprehensive support to creativity and innovation of the learners evidenced by their participation in community service (chapter 3.12.) and in the conduct of research studies and development projects.

To improve the quality of studies and implement more optimally the resources of the teaching staff the college has commenced an analysis of general competence development on the curricula, focussing on a more systematic and harmonised approach to these competences on the curricula. For example, in 2017 the development of entrepreneurship teaching across the curricula was commenced at the college. The volume and content of the teaching and learning were analysed on the curricula and in 2018 common modules on entrepreneurship were developed and a relevant teaching position (0.25) was created. For optimal used of the teaching staff resources and for the development of interprofessional training, it is necessary to extend the opportunities for teaching general competences by the development of subjects courses to be used on all curricula.

Examples of general competence development on the curricula:

- Based on the e-health advances in Estonia a need was identified for the development of digital competences of the graduates and their readiness to use the e-health information systems. For this purpose, the integration of the e-health topic into the curricula of N, MW, BMLS and RG was started within the international *DeDiWe* project (2015–2018);
- From the autumn of 2018 an elective subject course *Organisation of international student conference* (4 ECTS credits) is offered to the learners of the college, giving them an opportunity to create a conference according to their own ideas and to develop general competences and skills necessary for daily life activities.

According to the development plan of the college, the year 2017 was dedicated to the integration of curricula, subjects and modules and to the promotion of cohesion between the subjects and modules. As a result of the development of interprofessional training, an effective collaboration takes place in teaching jointly of the learners from different curricula, as well as the collaboration with international teachers in training the teaching staff and developing the teaching. As of the

spring 2019 the students from two curricula are engaged in the conduct of interprofessional training although according to an objective of the development plan all curricula are planned to be involved.

Examples of the development of interprofessional training on the curricula:

- In 2017 joint seminars *The roles of a nurse and a radiographer in preparation of a child and a parent for radiographic investigations* were conducted in order to develop interprofessional training for N and RG curricula students within mandatory subjects, *Nursing of a sick child* and *Childhood pathologies in radiodiagnostics*, respectively. In 2018 the development of the subject course continued and in 2019 the involvement of the learners and teachers from the curriculum of CW is planned;
- In the academic year 2017/2018 an elective subject *Social work and health care* (2 ECTS credits) was conducted in collaboration with the UT for the N curricula students of the college and social work students of the UT;
- On 4.–6.12.2018 a joint training course on *Interprofessional education* for the teaching staff was carried out by Patric van Gele, Switzerland, in the volume of 16 hours; 18 teaching staff members took part in the course;
- In 2019, collaboration was started by the curricula of N and BMLS to teach jointly the topic of laboratory testing.

In the years 2016–2018 one of the priorities of the college was the development and opening of master's programmes. In 2017 the initial evaluation of an international joint master's programme in RG was successfully passed, but unfortunately not opened as the partner of the joint programme Klaipeda University did not get the permission to open the programme, based on the evaluation of the joint programme in Lithuania. On 30.11.2018 the college submitted to the MoER for evaluation a master's programme in RG (radiotherapy) in English; the programme passed the evaluation process in the spring of 2019.

The college has been leading the development of specialised nursing training (within project *Development of specialised nursing education* 2005–2008) and master's studies on specialised nursing in Estonia. In 2016 the development of a master's programme in HS was commenced on the initiative of the college in collaboration with the employers and the graduates, incl. the ENU, the MoSA, the UT and TallinnHCC. In 2015–2017, within the preparation process of the master's programme surveys were carried out by the teaching staff of the college among the nursing leaders of hospitals in Estonia, nurses, specialised nursed, graduates of the specialised nursing curriculum; career plans of the final year nursing students were analysed. The programme development was completed by the end of the year 2017. On 18.06.2018 the minister of education and research made a proposal to the Government of the Republic to grant the THCC the right for fixed term to conduct master's studies on the programme of health sciences within the health care study programme group and issue on completion of the programme an academic degree of master in health sciences until 31.12.2021. In September of 2018 the studies on the master's programme were commenced by 60 students.

The opening of master's studies in HS at the health care colleges of Tartu and Tallinn was recognised as *the Deed of the Year 2019* ("Aasta tegu 2019") by the ENU.

Strengths:

1. The college is the leader in the development of specialised nursing education and master's studies in health sciences in Estonia;
2. The graduates and the employers appreciate the competence of the graduates;
3. Curriculum development is carried out in continuous collaboration with the professional associations and the employers, the curricula are in accord with the needs of the labour market.

Improvement area: For optimal use of the resources, it is necessary to extend the opportunities for teaching general competences. **Planned improvement activities**: In 2020–2021, to carry out internal evaluation of the curricula, plan the review and revision of the statutes for curricula. Extension of subject courses on general competence development to be used on all curricula at the college. **Improvement area**: Not all curricula are involved in the conduct of interprofessional training. **Planned improvement activities**: In 2019 two curricula join the conduct of interprofessional training; by the beginning of 2020 all curricula.

3.8. LEARNING AND TEACHING

Standard: **Admissions requirements and procedures ensure fair access to higher education and the formation of motivated student body. The higher education institution systematically implements a student-centred approach that guides students to take responsibility for their studies and career planning, and support creativity and innovation. Graduates of the higher education institution, with their professional knowledge and social skills, are competitive both nationally and internationally.**

Admissions

Admissions to the college take place twice a year: in June-July and in December-January. Admission numbers of all curricula are approved by the training committee for health care workers in the MoSA. Admissions to the N and MW curricula are regulated until the year 2020 by the consensus agreement signed by the MoER, the MoSA, the EHA and the health care colleges of Tartu and Tallinn in 2016.

Table 8. Competition on the curricula of the college

Professional higher education curricula	15/16	16/17	17/18	18/19
Basic nursing	4.51	3.09	3.41	2.58
Midwifery	9.5	5.96	7.17	5.07
Physiotherapy	18.19	19.47	14.53	9.36
Environmental health specialist	10	3.93	4.86	5.57
Biomedical laboratory science	8.62	5.27	5.12	1.65
Radiography	8.62	7.4	8.4	6.15
Vocational training curricula		**16/17**	**17/18**	**18/19**
Emergency medical technician	4.83	4.04	3.96	3.4
Care worker	1.05	1.26	1.44	1.04
Client worker for people with mental health problems (school-based)	-	-	-	2.83
Client worker for people with mental health problems (workplace-based)	-	0.92	0.79	1.2
Childminder (school-based)	3.85	5.1	2.65	3.46
Childminder (workplace-based)	-	1.08	2	1.09
Masseur/masseuse	-	2.25	0.81	-
Specialist nursing ***Specialist training-master's studies since 18/19**		**16/17**	**17/18**	**18/19***
Health science (health nursing)	-	1.63	0.8	2
Health science (intensive care nursing)	2.7	2.5	3.6	4.4

Health science (clinical nursing)	-	1.53	1.27	2.53
Health science (mental health nursing)	-	1.47	1.6	2

According to the data (in Est.) of the MoER the number of final year students in gymnasiums is constantly decreasing (in 2013/14 grade 12 was commenced by 7173 students, in 2017/18 the prognosis was 6000 students), reducing the number of potential applicants of higher education institutions. Nevertheless, the admission competitions at THCC have been high over the years (Table 8); the curricula of PS, RG and MW have been the most popular ones. A decreased competition on the N curriculum is definitely related to the increase in the admission numbers. In the academic year 2018/2019, for the first time a fee-charging part-time study group in Tallinn was opened in winter on the PT curriculum that had its impact on the competition averages (in summer 13.2 and in winter 3.4).

Admissions to the college are organised based on Rules of student admissions at Tartu Health Care College adopted by the college council. Before the admissions the admission strategy is drawn up under the leadership of the communications manager including the activities and information channels for the dissemination of admission information. At the beginning of an academic year the admission process is analysed and a survey is carried out among the admitted students about their satisfaction with the admissions (Figure 15). If needed, proposals are made to the college council to make changes in the organisation, rules or some other aspect of the admissions. Satisfaction with the admission process is high among the admitted students; their proposals are mainly related to the preliminary information provided about the admission test and its structure.

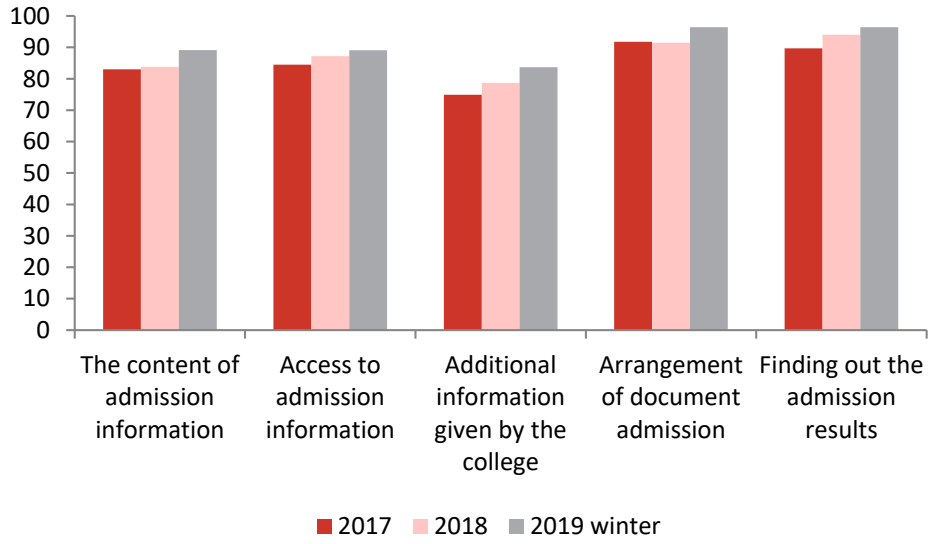


Figure 15. Admitted students' satisfaction with the admission process in 2017–2019 (respondents who are satisfied or completely satisfied (%))

Examples of the admission process development based on feedback:

- Based on the proposals of health care institutions in Tallinn an admission interview was organised with the applicants to the BMLS curriculum in 2018/2019; the representatives of employers were involved in the admission committee;
- Based on the feedback of admitted students the admission rules were revised in the academic year 2018/2019, by adding a possibility to take the admission test also outside the college, if needed (e.g. an applicant is abroad or for some other reason);
- Based on the feedback of admitted students, the information about the admission test was specified on the college website and the revision of the test structure was commenced.

Recruitment of motivated and professionally steady learners
The college is continuously popularising its curricula and study opportunities in schools and kindergartens. For example, the college participates in education fairs and career days, open door days are organised for interested people in Tartu and in collaboration with the partners in hospitals in Tallinn (see events participated in 2014–2018 (in Est.)). Health awareness workshops have become very popular (total number of participants 2014-2018 approx. 1000); they are organised with the help of resources from the gambling tax council. Student shadowing is available for potential applicants throughout the year; in 2018 this opportunity was used by 117 persons to have a close look at student life.

The college has signed collaboration agreements with eight gymnasiums, including collaboration focussed on promoting the awareness of and interest in studies in the fields of medicine and health care. Various health awareness promotion packages are offered to gymnasiums by the college that include a combination of theoretical knowledge and practical skills. The most popular packages include first aid (16 hours), physiology and biochemistry (16 hours), healthy training (32 hours) and health awareness (21 hours).

Organisation of studies
The study process is the core process of the college and it is described in the quality manual (in Est.), including the objectives, activities, responsible persons, measuring instruments, indicators and documents regulating the activity.

Based on the development plan, one of the priorities related to studies is the extension of the forms of study and the provision of part-time studies. Studies on all vocational training curricula are organised in sessions, facilitating the combination of studies with work and family life. Session-based studies are increasingly implemented in higher education. Until 2016 studies in N curricula with a shortened study period were organised in sessions and from the academic year 2016/2017 the studies of N and BMLS students, admitted in winter, are organised in the same way. Interest in session-based studies among potential applicants is high; and taking into account the increasing age of the admitted students (in the summer 2017 – 61% of the students admitted to the N curriculum came directly for gymnasiums, in 2018 – 56%), a decision was made at the college to organise session-based studies also for one group of N students commencing their studies in the autumn of 2019. In the academic year 2018/2019 besides full-time studies also a part-time study group of PT curriculum was opened. In future, it is planned to offer part-time studies to master level students and to analyse opportunities for its implementation at the level of professional higher education.

The organisation of studies is started each year with the adoption of the academic calendar by the college council; the calendar has been prepared by the pedagogical board. Based on the academic calendar a schedule of practical training is drawn up for the whole college and also study schedules for the curricula for the particular academic year. The study schedule includes the determination of periods for theoretical studies and for practical training and other dates relevant for studies (e.g. the date for submission of the final thesis etc.). The study schedule is available to students on the intranet. In the preparation of the timetable the following aspects are taken into account: the cohesion of subjects within modules, the types of study rooms to be used, the workload of the teaching staff and their individual needs for the conduct of studies, the trainings and work-related travels of the teaching staff, the requirements related to another workplace in case of part-time teachers. The timetable, syllabi and other information related to the studies is available to the learners and to the teaching staff in the SIS.

The learners appreciate the general atmosphere of the college, an opportunity to deal with independent learning in the rooms of the college, an opportunity to acquire theoretical specialist knowledge and practical skills and an ability to implement the knowledge and skills in practice, and the SIS (see learners satisfaction). The students assess highly also the availability of lecture materials, the effectiveness of international collaboration, the development of independent working skills at the college and the syllabi.

Learning and teaching

The conduct of studies is based on a syllabus, the format of which is adopted by the pedagogical board. A syllabus is developed by the teacher in charge of the subject course in collaboration with other teaching staff members and it is approved by the head of the relevant study department. A logical sequence and coherence of subjects is ensured by a continuous and systematic collaboration of the teachers on the curricula. Once a year the content of subjects is evaluated based on up-to-date evidence-based standpoints, and their horizontal and vertical cohesion is reviewed; if necessary, revisions are made in the syllabus and module assessment, the cohesion between the modules is developed. The teachings staff members are continuously developing their skills of effective reflection and feedback provision in order to support self-directed learning.

Guiding and supporting a learner is in the centre of the study process throughout the whole period of studies. Implementation of various active learning methods supports student activation and their knowledge building, learning in a group, experience sharing, collaboration with group-mates and the teacher. To promote and develop the effective use of active learning methods (e.g. problem based learning, simulation based learning, digital studies etc.), the teaching staff members take part in trainings individually as well as in joint trainings.

Blended learning is often used in the process of studies. In 2017 the experience of e-learning implementation was analysed resulting in a proposal to change partly the volume of seminars (e.g. *Nursing of geriatric patients*) in the academic year 2017/2018. An overview of the development of digital studies 2016–2018. The development of digital studies at the college is led by the learning designer who supervises and supports also the teaching staff as well as the learners. From the perspective of the development plan 2015–2020 the extent and effectiveness of implementation of active learning methods still needs to be analysed.

Examples of the use and development of active learning methods at the college:

- On the RG curriculum the *Journal club* method is used in subject *Research methods* for second year students focussing on the skills of reading research articles in English and appraising the reliability of research studies and their results presented in the articles; most of the studies in the subject course is meant for independent work;
- In 2017 the anatomage table was acquired by the college that is widely used on all curricula. The *SimWiew* solution recording the voice and simulation opportunities is used in the skills labs for pre-clinical practicums;
- In 2017 a working group was formed for a purposeful development of simulation based training and sharing the experience; the group involves members from different curricula of the college. Several joint trainings on simulation based training have been conducted for the teaching staff with an aim to support the development of this type of training;
- In 2018 a research study was conducted *Perceptions of simulation training impact amongst radiography students*. The changes based on the results of the research study will be implemented to the curriculum and in the study process in 2019.

The study process at the college supports comprehensively the learners' participation in national and international competitions; within last three years several students have been awarded national or international recognition or won prizes.

Practical training

The process of practical training is described in the quality manual and it is regulated by *Procedure for practical training at Tartu Health Care College*. All students are provided by the college with a place for practical training in a practice institution. For this purpose the college has signed permanent contracts for practical training with the practice bases. The students of the college are wearing a college uniform and a name tag during practical training that supports the development of organisational culture and the sense of identity as a student of THCC as well as supporting the aesthetic development of a student. Each learner is assigned a supervising teacher at the college and a supervisor of practical training in a practice institution.

The schedule of practical training on the curriculum is drawn up by taking into account the practice bases that have signed a contract with the college and while choosing a place for practical training the possibilities of the practice bases are considered, as well as the learning outcomes for the practical training on the particular curriculum and, if possible, the wishes of a student regarding the site of practical training. To improve the supervision of practical training a purposeful training for the supervisors was commenced in 2006. After passing the basic training, the supervisors are able to implement supervision methods that suit the outcome-based practical training, analyse the role model of the supervisor, understand the principles of outcome-based assessment and implement various methods for giving feedback. To support the supervisors of practical training and improve the quality of training, introductory seminars of practical training are organised in hospitals, involving the supervisors of practical training, teachers from the college and the students. As of 01.10.2018 those seminars had involved 55 supervisors in hospitals and feedback given by the hospitals is very positive.

In quality assurance of studies, an effective collaboration with practice bases in the development of supervision is considered essential by the college. In the spring of 2017 negotiations with all bigger health care institutions took place in order to specify the organisation of practical training on the N curriculum. In 2019 the college in collaboration with practice bases continue the conduct of research studies and the evaluation of practice environment. For example, to support more effectively the learning that takes place during practical training, a research study was started in 2018 with a purpose to explore student learning in a practice environment; the research results will be used in the development of the curricula. The preliminary research results have provided an input for the development of practical training documentation.

Graduates

The general employment rate of the graduates, but also their further studies serve as important performance funding components of state activity support of the college. The relevant indicator is the situation in the labour market, i.e. the proportion of students employed or involved in studies at the next higher education level from the total number of graduates at the level of higher education. In 2018 the value of this indicator for THCC was 96%, being the best result among all higher education institutions. The average of all higher education institutions (incl. universities) is 83%. The proportion of graduates with the standard period of study is also high (77%), being the second best results among 12 higher education institutions in Estonia. The average result of higher education institutions in Estonia is 50%. A survey conducted in 2019 (in Est.) among 2500 employees demonstrates that the graduates of the college find more easily a good job than the graduates of other higher education institutions in Estonia (94% of respondents found work within a few months after graduation).

In 2013 the quality assessment committee of the study programme group highlighted among the strengths of the college the employers' and graduates' satisfaction with the curricula and the competence of the graduates. According to the results of the survey conducted in 2015 by the MoER among the graduates of higher education institutions about 90% of the college graduates are employed in a position that is very close to or largely related to the speciality they had acquired (the average of other higher education institutions is 82%). 95% of the graduates are satisfied with their choice of the educational institution and they cope well with professional duties in their present job; 94% are satisfied with their choice of curriculum/speciality and 90% feel they are competitive in the labour market. The employers expressed also their satisfaction with the training of health care staff in the expert interviews that were conducted in the preparation of the OSKA report in the field of health care in 2017 led by the Estonian Qualifications Authority.

Strengths:

1. The graduates have good preparation and they are valued specialists, the employment rate of graduates is high;
2. Offering different ways of organisation of studies due to a changing profile of the learners, flexible organisation of studies;
3. Continuous and systematic training of supervisors of practical training to improve the quality of supervision and implement formative assessment.

Improvement area: Video lectures that could be watched in advance or afterwards are not used on all curricula (the target level of the development plan for 2015–2020 is not achieved) **Planned improvement activities**: Analysis of a need for the creation of additional video lectures by the end of 2019. Extension of the range of elective subjects based on digital solutions. **Improvement area**: To improve the quality of practical training the student learning in practical training should be explored and the practice environment systematically evaluated. **Planned improvement activities**: Analysis of research results regarding student learning within practical training and planning improvement activities in 2021. Analysis of the results of the project on evaluation of the practice environment, planning improvement activities in 2020.

3.9. 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. The objectivity and reliability of student assessments are ensured.**

The principles for assessment of the achievement of learning outcomes

Assessment of the achievement of learning outcomes, including self-assessment, form part of the study process, within which fair and objective assessment of the levels of knowledge, skills and attitudes achieved by a learner is conducted according to the identified assessment criteria and on the basis of learning outcomes determined in the curriculum. Assessment is aimed to support learning and provide reliable information about the effectiveness of the completed studies. General assessment principles of the achievement of learning outcomes at the college are described in the study regulations.

In the assessment of the achievement of subject learning outcomes, attention is also paid to the assessment of general learning outcomes, for example, teamwork and communication skills. Versatile methods are used for assessment: written and oral exam/test, self-evaluation test, portfolio, scenario-based task, presentation, group work, reflection, video analysis, concept map etc.

Module exams are assessed by assessment committees involving practitioners and the representatives of employers.

Objective structured clinical examination (OSCE) that is widely used in the world is applied on the radiography curriculum and the master's programme in health sciences. This type of exam provides a good overview of student skills, knowledge and attitudes, as well as about their ability to implement those knowledge, skills and attitudes in solving a particular clinical case. The examination results give also a good overview of teaching, including the teaching principles and methods that need to be reviewed and revised.

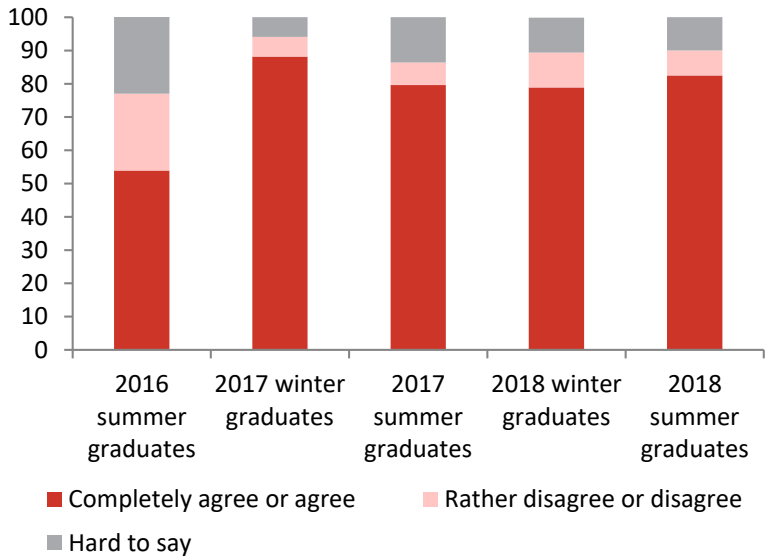


Figure 16. Graduates feedback on assessment (percentage of respondents)

In case a student fails an exam or pass/fail assessment, they have an opportunity to re-sit the exam or participate in re-assessment; if needed, an individual study plan is drawn up for a student. Results of graduate surveys of last three years show that according to their evaluation the conditions, criteria and methods of assessment are understandable and transparent (Figure 16).

Assessment of practical training

Practical training forms and essential part of the curricula and the college has continuously developed the supervision and assessment of practical training. During practical training a learner is continuously provided support and formative assessment by an individual supervising teacher at the college and a supervisor of practical training in the practice institution.

A learner is given comprehensive support during practical training, their development and the achievement of learning outcomes is regularly documented. Student development throughout the period of studies is recorded in their individual practice book (on paper or electronic) that includes analysis of and feedback on all practical training periods of a student by students themselves, by supervisors of practical training and supervising teachers at the college:

- A student analyses oneself within each practical training period, at the end of practice analyses oneself as a learner, reflects on the achievement of general and individual learning outcomes, supervision and environment of practical training;
- A supervisor of practical training in a practice institution analyses and evaluates student performance and development in the practice institution;
- A supervising teacher at the college, in collaboration with a student and a supervisor in practice institution, conduct summative assessment of the achievement of learning outcomes within a particular practical training period, highlighting the development potential and paying attention to the development needs of a student.

Written analysis of practical training in the practice book makes it possible for all parties to continuously monitor student development and direct them according to their needs. At the end of practical training a student is given evaluation regarding their ability to implement theoretical knowledge in practice, their ability to cope in different situations, communication skills and ethical conduct. If possible, 3-party summative assessment of practical training is carried out in a practice institution, participated by a supervisor in the practice institution, the supervising teacher and a student. 3-party summative assessment given at the end of practical training is considered very important as it provides a student with a comprehensive feedback on their ability to connect theoretical knowledge with practice. Based on the summative assessment a student determines individual learning outcomes for next practical training period.

Assessment of final theses and final exam

Defence of final theses and the organisation of final exam at the college are regulated by the study regulations, guidelines for written papers and guidelines for writing and assessment of final thesis. To promote the competence of supervisors, trainings have been organised for all supervisors on the following topics: research methods, academic writing and the supervision process, research ethics and copy right. For example, in 2018 a joint training for the teaching staff took place on the process of writing systematic literature reviews and on dissemination of research results.

Final theses can be written individually or in pairs. Pair work in thesis writing supports the development of student teamwork skills and ensures optimal use of teachers' working time spent on the supervision of students. In 2018, in total 144 final theses were defended, out of which 42 were written by two students (in 2017 – 211/52; in 2016 – 167/55).

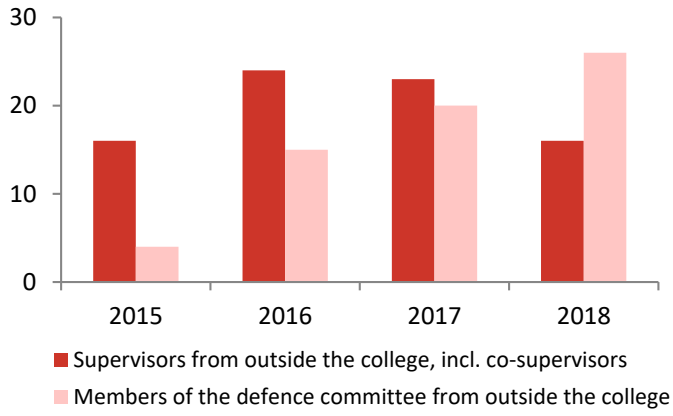


Figure 17. Involvement of collaboration partners in the final thesis process

Increasing number of various employers (e.g. the health board) and authorities (e.g. the rescue board, the police and border guard board) are included in the conduct and defence of final theses (Figure 17). The collaboration partners of the college are engaged in the reviewing of final theses (excluding the N and MW curricula where a final thesis is not reviewed) and they also chair the defence committees, assuring the objectivity of the assessment.

Assessment criteria for final theses are described in details in the guidelines for final theses; the defence committee members fill in the assessment sheets based on the assessment criteria during the assessment. The vocational training curricula are completed by the professional examination; the assessment committee includes the representatives of professional associations and employers who have assessment experience in the field.

Recognition of prior learning and professional experience (hereinafter *RPL*)

The system of recognition of prior learning and professional experience is functioning at the college, regulated by study regulations. The RPL system is frequently used for the recognition of prior studies, but also prior trainings, work experience, participation in specialist conferences. Implementation of the RPL system has considerably increased in last five years.

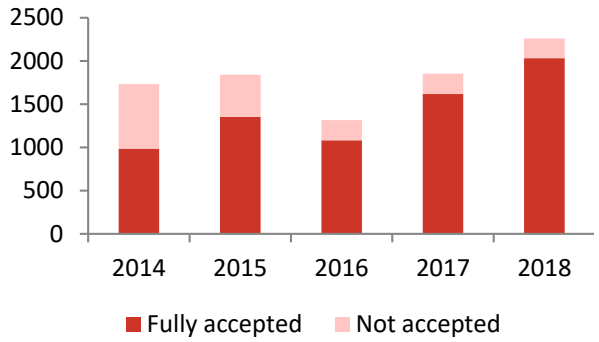


Figure 18. RPL statistics in professional higher education (in ECTS)

In 2014, on the level of professional higher education, 351 RPL application sets were submitted in the total volume of 1739 ECTS credits (on the average 1.3 ECTS credits per student), but in 2018 the number of submitted RPL application sets was already 549 in total volume of 2258.75 ECTS credits (on the average 2.12 ECTS credits per student) (Figure 18).

Counselling on the RPL system is provided by the studies specialists, the heads of departments and the teaching staff members. The effectiveness of counselling is evidenced by an increasing number of fully accepted applications. Recognition of professional experience as part of curriculum or as practical training forms on the average 60% of the applications on the professional higher education curricula and 45% on the vocational training curricula. On the vocational training curricula 46% of the applications are related to the recognition of prior learning. Professional experience is recognised as part of the curriculum mainly in case of third and fourth year students who are working in parallel with their studies (80% of the learners). For example, in 2018 the professional experience was recognised in the completion of final practical training for 46% of final year nursing students (11% in 2016 and 32% in 2017).

Strengths:

1. The assessment system is clear and understandable, supporting the continuous development of a learner;
2. The representatives of the collaboration partners are participating in the final thesis process and in assessment of practical training, ensuring the objectivity of assessment;
3. Flexible recognition of the learners' prior learning and professional experience in the completion of the curriculum.

Improvement area: Analysis of assessment methods is necessary due to a changed learner, wider implementation of active learning methods and use of different forms of study. **Planned improvement activities**: Continuous analysis and development of the volume and cohesion of assessments for the implementation of methods appropriate for the assessment of the achievement of learning outcomes. Revision of the student feedback questionnaire in regards of assessment.

3.10. LEARNING SUPPORT SYSTEMS

Standard: **The higher education institution ensures that all students have access to academic, career and psychological counselling. Students' individual development and academic progress are monitored and supported.**

Organisation of student counselling

Up-to-date and well-functioning systems have been developed at the college that support a learner throughout the period of studies, taking into account the individual needs of a learner, as well as the needs related to the curriculum. The learners are provided with academic, career and psychological counselling; each learner's individual development and academic progress are monitored.

The support systems are aimed to assist a learner from admission to the graduation from the college. At the beginning of the studies a learner is informed of the studies specialist of their curriculum, i.e. the person whom to address in case of academic issues. This way the studies specialist becomes for a learner the first person to address, if needed. The role of the studies specialist is to listen to a learner and understand their problems, as well as to provide a learner with potential solutions. In case of more complicated situations that are beyond the competence of the studies specialist, a learner is referred to the head of department or the psychologist. The information about the support services and how to access the services is given to the learners from the first semester within briefings.

A well-functioning system of group leaders is in operation at the college
All student groups elect the group leader among themselves, who is the contact person or liaison between the college and the group. Activities of the group leaders are coordinated by the head of academic affairs department. The group leader system has facilitated the mutual exchange of information and the learners are more frequently and actively engaged in solving academic issues. For urgent information exchange the group leader and employee group on Facebook is used, where the support staff members can answer urgent questions.

To support the organisation of studies and monitor more effectively the quality of the studies, the work of studies specialists, and other support staff members related to studies, was reorganised in 2017; and the academic affairs department was established. The college collects regularly learners feedback on the organisation of studies, considering it in planning the organisation of work.

Examples:
- Based on the feedback given by the learners, the processes of timetable preparation and student counselling on academic issues were analysed in 2017, resulting in changes to the work organisation aimed to improve the movement of study-related information and ensure more personalised counselling to the learners;
- In order to provide more flexible organisation of studies, cycle-based studies were organised in 2016/2017 for the students admitted in winter to the curricula of N and BMLS. The need was based on the feedback by the students and the employers aimed to extend the engagement of potential learners and the network;
- Based on learner feedback, opportunities for language learning have been extended – in 2017 and in 2018 a project was successfully carried out by the college *Language learning activities for more successful coping in the labour market (*„Keeleõppetegevused edukamaks toimetulekuks tööturul“).

In recent years, the feedback on the organisation of studies has been relatively stable and it is too early to evaluate the results of work reorganisation of the academic affairs department in the spring of 2019; this analysis is planned to be conducted in the academic year 2019/2020.

Counselling – academic, career and psychological
Academic counselling is provided to the learners by the studies specialists, as well as by the heads of departments. The main duties of the studies specialists are to follow that a learner is fully informed about the curriculum, the conduct and organisation of studies, and the principles of study regulations. In case a learner is not able to participate in the studies at the common rate, they are offered alternative solutions for continuing their studies. Alternatives include the provision of information about the opportunities for academic leave or drawing up an individual study plan. It is the responsibility of the studies specialist to monitor carefully those learners who return from academic leave in order to support a smooth continuation of their studies.

The learners' academic progress is continuously monitored. In case a learner fails exam and/or assessments or does not participate in studies, they are invited for counselling by the studies specialist in order to prevent further problems. Within the counselling a learner is informed about the opportunities for an individual study plan and the extension of semester. For a learner with this kind of needs, an individual study plan is drawn up based on their special needs or academic abilities and preferences.

The organisation of practical training based on an individual study plan is becoming more common, giving a learner an opportunity to pass practical training at the time and place that suits them the best. The number of individual study plans has increased throughout the years (2015/2016 – 29; 2016/2017 – 36; 2017/2018 – 73). For example, on the basic N curriculum and the MW curriculum 11.6% of the students used this opportunity in 2017/2018. This way of organisation of practical training suits the practice bases which prefer to have students throughout the year.

As career counselling is closely related to the studies, incl. practical training; there is no separate career counsellor within the support services of the academic affairs department, although the studies specialist for the vocational training curricula has career counselling skills, which she uses for learner counselling according to circumstances. In addition, subject *Career planning* is included in all vocational training curricula. The component of practical training is quite extensive on all curricula and a direct contact with potential future employers takes place already within practical training, and therefore the learners are well informed about professional career opportunities at early stages of their studies.

Psychological counselling is available to all learners at the college who need it. Psychological support is provided by the psychologist whom the learners can visit on their own initiative or by recommendation of the studies specialist. Information about the opportunities and the organisation of psychological counselling is available on the intranet.

Supporting and counsseling international students

Incoming international students are supported by the international relations specialist, the heads of departments and the student council. All international students have a week for adjustment after their arrival, when the international relations specialist introduces them the college, they meet supervising teachers for their practical training, and, if needed, they demonstrate their practical skills in the skills labs of the college and make preparations for practical training. They are assigned supervisors of practical training in practice institutions, who have professional experience and are generally able to supervise an international student in English or Russian. E-courses in English have been developed for international students coming to the college. As the international students are coming to the college throughout the academic year at different times and in small groups, no common orientation weeks are organised at the college, instead the orientation days are provided for each small group. Considering the volume of internationalisation at the college, it is reasonable to re-organise the support system for international students and engage in it the learners of the college. The international students' evaluation of their experience in Estonia is high, for example in 2018 their evaluation result for the mobility experience was 4.4 on a 5-point scale.

Withdrawing learners

The proportion of learners who withdraw is decreasing in professional higher education from 2015 and is comparable with other professional higher education institutions. (Figure 19). About 19% of the withdrawing learners do it in their first study year. Over the years, about 70% of the learners who discontinue their studies do it in their first study year (mostly due to insufficient academic progress or unsuitability of the speciality); the learners rarely drop out in their final study year.

In case a learner is in a situation where withdrawal is indispensable, we ask about the reasons for the situation. The studies specialist talks to a learner or asks them to fill in a questionnaire, the answers of which inform about the withdrawal reasons and/or the learners' further intentions. The college supports the return to studies by the learners who have withdrawn, informing them about continuation opportunities. The withdrawal is mostly caused by the unsuitability of the speciality (25%), based on the learners' answers. The second reason for dropout is insufficient academic progress (22%). Economic and personal reasons (17%) have been mentioned among the common reasons for deletion from the matriculation register on the initiative of the learner.

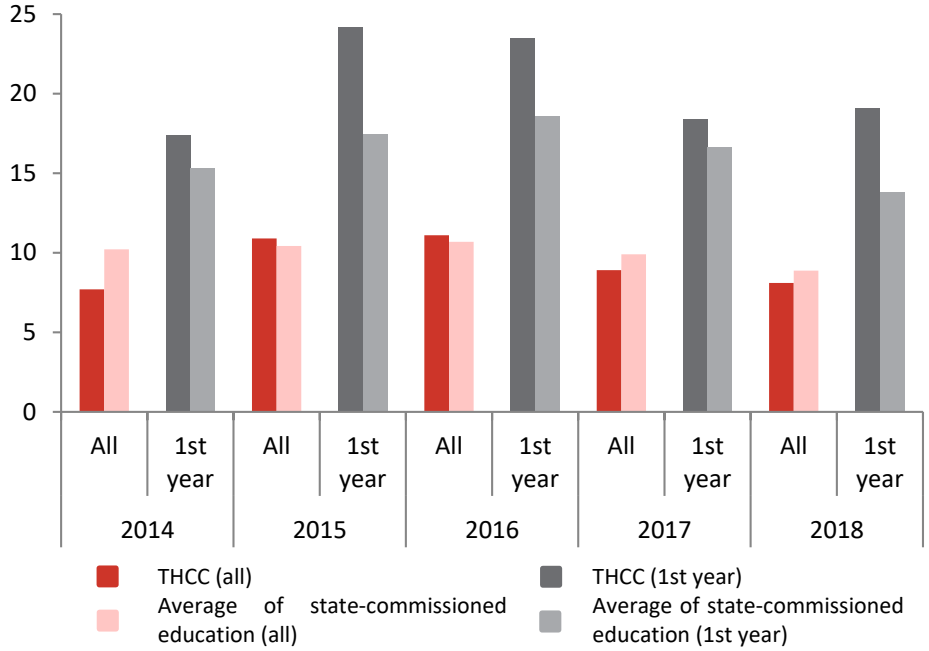


Figure 19. Dropout (%) in state-commissioned education in 2014-2018*
*HaridusSilm

Student participation in extra-curricular activities and civil society initiatives
The learners participate actively in extracurricular activities and civil society initiatives; they are engaged in the provision of community services within the conduct of health days of an institution. In addition, community services are offered by the competence centre of the college (see chapter 3.12.). The college supports comprehensively the learners' participation in trainings and sports events; they have an opportunity to use the gym of the college. Based on the data of the Estonian Academic Sports Federation, as of the spring 2019 the THCC is in the second place according to the YLISPORT activity cup ratings of general amateur sport series among higher education institutions in Estonia, being one of the top three most sportive higher education institutions.

Strengths:
1. The college asks regularly feedback from the learners and takes it into account in planning changes to the organisation of studies;
2. Individual needs and possibilities of the learners are comprehensively taken into account;
3. Functioning of the group leader system that facilitates the understanding and dissemination of study-related information, as well as the communication of proposals and problems.

Improvement area: Need for evaluation of the effectiveness of work reorganisation in the academic affairs department. **Planned improvement activities**: Analysis of the effectiveness of the changes to study organisation, identification of improvement areas and planning improvement activities in

2019/2020. Informing the learners about the improvement activities made on the basis of their feedback. **Improvement area**: More effective and systematic supporting of international students. **Planned improvement activity**: Creating a buddy programme for international students to support their adjusting.

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

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

Objectives and focus in the fields of RDC

RDC activities are predominantly based on the priorities related to the development plan of the college, they are in accord with and supported by the mission and vision of the college. Research planning at the college was commenced in accord with the development plan and for that reason the plan for research studies is valid for the years 2016–2020. The college is aimed to provide a dynamic environment where the promotion of knowledge and research in collaboration of the employers, staff members and learners is facilitated and encouraged. The research studies carried out at the college are aimed to develop nationally and internationally the professional fields and the process of studies based on evidence-based research in collaboration with different interest groups. The RDC activities are related to the main objectives of the development plan and the core values of the college. RDC priorities are the study process, health and evidence-based development of the profession.

The topics and plans of research are discussed once a year within a development interview conducted by the head of study department where the working time of a teacher are planned for RDC activities. About 30% of the teaching staff is engaged in research studies (about 40% of FTE). According to the *Planning workload of academic staff* each academic year minimum 400 hours are meant for research in the position of docent and up to 200 hours in the position of lecturer. Analysis of workload planning conducted in the academic year 2017/2018 demonstrated that on the average 340 working hours are planned for research and 309 for development in the position of docent.

Students involvement in research studies is highly valued in College (Table 9). Topics of research studies are chosen in the way that enables the involvement of students to provide them with research experience and with data for writing a final thesis. The results of research studies facilitate the development of a professional field and are used in the study process.

Table 9. Students and teachers involvement in research studies

YEAR	2016	2017	2018
Number of students involved in research studies	20	25	28
Number of teachers involved in research studies	27	25	25
Total number of research studies	19	17	23

To coordinate and organise the RDC activities of the college a board, involving the representatives of different curricula, has been functioning at the college since 2008. In 2018 the name and the content of activities of the former applied research board were updated; from 01.09.2018 it is named the research and development board (hereinafter *RDB*) that is aimed to coordinate the RDC activities at

the college. The RDB membership is formed of the members of the study and research structure in collaboration of the rector, the vice rector for academic affairs and the heads of study departments and approved by a directive of the rector. All the professional higher education curricula are represented in the RDB. The change of the name and the content of activities are related to the expectations and a need for a wider collaboration across the fields in the RDC activities. The duties of the RDB involve the provision of input to the research and development directions in the development plan and activity plan of the college, the aggregation of the results of research and development projects, counselling on the preparation of research and development projects and following their implementation, guiding the interdisciplinary collaboration in the research and development activities of the college as well as the organisation of scientific conferences of the college and the publication of the collection of research articles. The RDB activities are regulated by the rules of procedure for research and development board adopted by a directive of the rector and its work process is described in the quality manual (in Est.).

The college places a high value on the role and responsibilities of the field of RDC in society, evaluates the results of its RDC activities, their international visibility and societal impact. For example, in 2014–2018 in total 38 high-level articles were published, incl. 25 articles at level 1.1.

The total number of publications by THCC in ETIS in 2014–2018 is 441 (Table 10), in comparison the total number in 2007–2012 was 393.

Table 10. Publications in ETIS in 2014–2018 as of May 2019

High-level publications	2014	2015	2016	2017	2018
Categories 1.1.; 1.2.; 2.1.; 3.1.	8	5	4	8	13
In total	128	103	76	42	92

In comparison with the previous institutional accreditation (2007–2012) the number of publications according to their categories in ETIS in the given period (2014–2018) is as follows: category 1.1 – 11/25 publications; category 3.2 – 46/103; category 5.2 – 37/53 publications. The major decrease is related to the proportion of popular science articles that has several reasons: 1) the college is definitely focussing more on high-level publications due to its target to open master's programmes; 2) a changed process of entering publications into ETIS at the college – in relation to the structural changes entering the publications into ETIS is now the responsibility of each employee; 3) a bigger actual number of popular science articles is evidenced, among other things, by the fact that on the average 30 to 40 articles are published by the staff of the college in our web-magazine *Tervist!*, but only one third of them is included in ETIS regarding the years of 2017 and 2018. On the average, each year there has been 1.3 publications in ETIS per academic staff member of the college in 2014–2018.

In comparison with other professional higher education institutions in Estonia the college is distinguished by its relatively big amount of high-level publications (Table 11).

Table 11. High level-publications by professional higher education institutions (incl. the number of 1.1 publications) as of May 2019

ETIS publications	2014	2015	2016	2017	2018
THCC	**8 (7)**	**5 (2)**	**4 (3)**	**8 (7)**	**13 (6)**
TallinnHCC	4 (0)	3 (2)	7 (2)	5 (0)	12 (1)
TTK University of Applied Sciences	16 (1)	16 (2)	5 (2)	6 (2)	8 (4)
Estonian Academy of Securiy Sciences	13 (5)	11 (2)	12 (5)	11 (1)	7 (2)
Estonian Aviation Academy	2 (1)	2 (1)	2 (2)	6 (2)	1 (0)

Lääne-Viru College	0	0	2 (1)	0	3 (0)
Pallas University of Applied Sciences	11 (4)	3 (1)	6 (2)	6 (3)	2 (0)
Estonian Military Academy	28 (4)	26 (6)	28 (9)	28 (3)	23 (2)
Estonian Entrepreneurship Univeristy of Applied Sceinces	12 (1)	6 (2)	13 (4)	7 (3)	6 (1)

The number of presentations made by the teachers at national and international seminars/conferences has increased; the key outcome set in the development plan has been attained (Table 12). The total number of presentations made by the teachers has increased, although the number of international presentations has been stable. As international presentations form one of the key indicators in the development plan, attention should be paid to it and the system for data collection should be improved.

Table 12. Presentations of teaching staff in 2015–2018

Presentations	2015	2016	2017	2018
In total	32	32	40	67
Incl. abroad	19	17	11	20

In the field of research, it is essential for the college to have a wide range of collaboration partners in society as well as among the representative of employers. The college responds flexibly to the research needs of society and the labour market and plans its research studies in collaboration with enterprises, public sector institutions and organisations of the third sector.

Examples:

- Collaboration with the Police and Rescue Board: health behaviour and health indicators of professional rescuers (2016–2018; principal investigator Ülle Parm) followed by a study *Health related aspects in police work* (principal investigator Anna-Liisa Tamm). Discussions with the employers and the graduates (2017) highlighted a wider need for focussing on psychosocial risk factors;
- Collaboration with the Road Administration on the topic of security equipment: initiated by a student final thesis, a research study on security equipment for children was conducted in collaboration with the road administration. Several final theses have been defended, conference presentations made and articles published within this study. The student continued to investigate this topic within the master's studies in the Institute of Technology of the Estonian University of Life Sciences. At present this graduate is conducting training courses at the open college available to everybody interested in the topic; the relevant elective subject is offered to all learners of the college as well as specifically to the learners on the curriculum of childminder.

Research related to the study process is generally based on internal needs and inspired by the vision of the college, although research in the fields of health and professional development is mostly based on the needs of employers. Research studies have also been inspired by current issues in society, e.g. studies on vaccination behaviour that involved the representatives of several curricula – EHS, N and MW.

In total over 35 research studies were carried out within the reporting period for institutional accreditation in 2014–2018. Within this development plan period, from 2015 until the spring of 2019, in total 17 new research studies have been started at the college (2015 – 2; 2016 – 7, 2017 – 6; 2018 – 2); 17 studies have been completed and 17 studies are currently being carried out. Research studies give the teaching staff an opportunity to relate evidence-based investigations with contemporary practice and to implement the obtained results in research, development as well as in teaching. This facilitates the promotion and maintenance of the teaching staff competences, incl. in

the field of research (e.g. work with literature sources, planning and conduct of research, data analysis). Research studies support the internationalisation and professional development of the teaching staff that has served as an essential basis for the opening of master's programmes. Conduct of and participation in research provides the teaching staff with an opportunity to make presentations in international conferences that, in turn, serves as image-building of the college with the help of teachers and students. For example, our teachers have been invited to participate in scientific and editing committees of international conferences. The college signed a collaboration agreement in the spring of 2018 for the organisation of an international conference Public Health and for increasing the research capacity of the conference.

Participation in research studies provides the students with very good research and collaboration experience, enabling them the implementation of their own research results in professional development and in the promotion of health in society. The engagement of students in research activities develops their competences that are required for the completion of the curriculum like the preparation and conduct of investigations, writing the final thesis and, in collaboration with teachers, publication of articles and making presentations on the basis of research results. On the average 10% of students write their final theses in relation to some research study conducted at the college. There are several ways for rewarding excellent student works, e.g. from 2011 each spring the best final theses are submitted to the stipend competition *The best final thesis in professional higher education institutions* organised by the RCUAS and the Foundation of Estonian Universities of Applied Sciences and also to the national competition of student research.

The channels organised under the leadership of the college for the dissemination of information about the research and development activities involve a scientific conference, an international student conference and the collection of research articles:

- The first scientific conference of the college took place in 2014 and was participated by 312 staff members and visitors. So far, three conferences have taken place aimed to disseminate the results of research studies carried out at the college; in 2016 the number of participants was 259 and in 2018 – 339. The conference takes place every other year. One third of all the participants in the last conference formed the students of the college;
- In 2017 the first international student conference *Health in Our Hands* took place where 12 oral presentations and 25 poster presentations were made, involving presenters, listeners and members of the scientific committee from 11 countries (Estonia, Finland, Czech, Latvia, Lithuania, Slovenia, Croatia, Greece, Poland, Holland and Vietnam). According to the feedback of the scientific committee members the 35 presentations were high-level, the evaluation matrix and the electronic evaluation system developed by the organisers were logical and easy to understand, facilitating the evaluation of the presentations by the committee members. Students of the college were also involved in the organisation team of the student conference; in 2018 a relevant elective subject course was offered to the students. Next student conference is taking place in November, 2019;
- A collection of research articles is published each year to disseminate the information about the research studies and final theses; in 2018 the twelfth collection was published. Articles in the collection are in Estonian including also abstracts in English. The article collections are spread at the conferences of the college, delivered to the collaboration partners and are available online to everybody interested in the topics. From 2017 the abstracts of presentations made at the college conferences are also included in the collection of research articles.

The organisation and management of the RDC activities is taking into account the specific features of fields and the mission (profile) of the college.

One important achievement and a sign of collaboration is an international patentable invention in 2015: *A mechanotherapeutic device and the measurement method* owned by the college together with the UT. This investigation is continued and in 2018 funding was received based on project Applied research in smart specialisation growth areas: NUTIKAS (125 000 euros); in 2019, the purpose is to develop collaboratively a mechanotherapeutic device that has wireless connection with a computer or a smart phone for real-time monitoring of measurement results. The measuring device with a wireless charging option would also be shock-resistant.

Development projects

Development projects facilitate the promotion of international collaboration and enable the development of learning materials. On the average, the college has been related to 15 projects each year in 2014–2018 (Table 13). The majority of them form international projects; the college is having the role of the leading partner in half of the projects. In the first half of the year 2019 active collaboration is conducted within 8 projects (incl. 5 international projects).

Table 13. Number of current development projects in 2014–2018

YEAR	Total number of current projects	Projects led by THCC	International projects
2014	8	1	5
2015	12	3	10
2016	12	6	9
2017	21	11	14
2018	21	12	14

Example:

- In 2018 an international project *EBreast* (2015–2018) led by THCC was completed. Within this project three research studies were carried out, nine presentations were made at international specialist congresses and national conferences. In addition, three e-learning modules were created and five articles published in international peer-reviewed journals. A project proposal for the continuation of the project was submitted in March 2019.

There is no separate baseline funding for research and development activities for professional higher education institutions in Estonia. Resources for RDC activities come from the general activity support that is predominantly meant for teaching or from external funding of projects. This is the biggest obstacle inhibiting the increase of RDC activities. Even without target state funding the college has contributed to the RDC activities on the average 10% of the total budget based on its activity support and project funding.

Strengths:

1. Cohesion of the RDC activities with teaching and studies;
2. Research and development board (RDB) (collaboration across the college in RDC activities);
3. Increasing number of high-level publications.

Improvement area: research in professional higher education institutions in Estonia. **Planned improvement activity**: Paying attention to the limitations of state funding and active explanations in order to ensure target funding for research activities in professional higher education institutions. **Improvement area:** Limited number of organisations/enterprises ordering research studies as fee-charging services in the field of health care. **Planned improvement activity**: Systematic informing and marketing about the research possibilities and competences at the college.

3.12. SERVICE TO SOCIETY

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

In 2017–2018 one of the important activities at the college was the development of the competence centre within the HiT! (*Educational investment in health care*) project: the competence centre involves community services offered by the college, in-service training as well as research and development activities.

Community service
An objective of the college is to guide with its activity the behaviour of community members by raising their awareness in collaboration with different partners (e.g. Tartu city government, TUH, the Science Centre AHHAA, the ENU, the Estonian Academic Sports Federation, general education schools etc.).

The main idea underpinning the organisation of services offered by the competence centre is to provide different target groups (from toddlers to the elderly), who have various health problems, an opportunity to be cared for and listened to by the students and their supervisors in the relevant field who may recommend a visit to the family doctor or a specialist doctor, if necessary (e.g. for diagnosis, laboratory testing etc.). The college offers a wide range of services through practical activities performed by the students; these activities are carried out within different subjects of the curriculum. The competence centre is a centre for experiential learning for the students, practising specialists and for the community in general. The vision of the competence centre is to be a high-quality experiential learning centre for the students, a lifelong learning centre for practising specialists and an experience-based opinion leader for the community in general.

Objectives according to the target groups:
- To offer the students diverse practical training, resulting in education that meets the needs of society and a high-quality preparation for competition in the labour market;
- To offer the practising specialists formal and informal in-service training in the specialist field that supports professional development in the context of lifelong learning;
- To offer the community members high-quality services and counselling in order to increase their awareness of health promotion, potential health problems and their prevention possibilities;
- To develop and extend the possibilities for research, requiring different areas of competence, in collaboration with enterprises and be a centre for potential entrepreneurship for young specialists.

Various activities targeted to the community are regularly organised within the studies on the curricula (e.g. lectures for expecting families, exercises for pregnant women, exercises for toddlers, movement activity hours for the elderly, individual counselling in the field of ergonomics etc.). Community service is interconnected with the studies in the form of a subject course, elective or optional subject course or voluntary work. In the conduct of community service an important role is played by the teachers, learners as well as by other staff members of the college. The activities are designed on the basis of the development plan and an action plan of the college, the interests of target groups and learning outcomes of the curricula in order to ensure maximum benefit for all parties participating in the collaboration. A good example is the organisation of charge-free health days for the community once per quarter in collaboration with the ENU and TUH. Tests are carried out by the students of the college who gain valuable practical experience under the supervision of

nurses who belong to the nurses' union and are employed by the hospital. As of 01.05.2019 nine services (in Est.) are regularly offered to the community by the college.

Examples of services provided to the community within the studies:

- From October of 2013 lectures for expecting families are organised where the MW students under the supervision of their teachers share knowledge about pregnancy, delivery, care of the newborn baby etc.;
- Within the subject on neurological physiotherapy on the PT curriculum a training group of patients with neurological disorders is organised, giving the students an opportunity to practise directly with clients who have neurological disorders;
- In 2016 the first special room for the provision of services was equipped and practical training *Massage therapy* for third year PT students was started, within which massage service was offered to the employees of the college and to the collaboration partners;
- In the spring and autumn of 2016 hand washing was taught to second grade pupils of schools in Tartu by 18 second year MW students and 18 third year N students within practical training *Nursing care of a sick child*. The project involved 12 schools from Tartu, 35 pupil groups and in total about 860 pupils;
- Third year RG students prepared a seminar on *Early detection of breast cancer* within subject *Radiodiagnostics of the breast pathology* that was conducted on Healthy Thursdays organised by the college;
- Second year RG students prepared as their independent work a seminar *Medical ionising radiation: harmful versus harmless* within subject *Radiation protection;* the seminar was carried out in researchers' night, on Healthy Thursdays organised for the community members by the college and during the open doors event.

In addition to the services, the college organises events targeted to the community that popularise the college; and participates in bigger events organised by other institutions like student days in spring and in autumn, the researchers night festival organised by the Science Centre AHHAA etc. The organisation of a fund-raising Christmas fair in collaboration with the student council has become a tradition. In spring and autumn time collaboration with kindergartens and basic schools is more intensive when almost every week there is a group of children visiting the college to have a house tour and improve knowledge on some health topic. Interest shown in the services and events offered by the college is evidencing that the community perceives us as a trustworthy and recognised partner.

In 2015 THCC was awarded the title *the Education Deed of the Year* („Aasta tegu hariduses") as the developer of health aware attitude and behaviour. In addition, the college was recognised as a health developer in society by the EHA for an outstanding contribution to the health care system in 2015.

In 2016 the college celebrated its 205th anniversary; during that year 148 activities were targeted to the community involving more than 8000 community members. 35% of the employees and 12% of the learners were engaged in the conduct of those activities. The curricula of the college were introduced to potential applicants in 12 fairs, 24 house tours were organised in the building of the college. In order to extend the options for community service, collaboration was commenced with sports clubs and a collaboration agreement was signed with the Special Olympics Estonia. In collaboration with the medical pathway students at Tartu Tamme gymnasium educational videos (in Est.) were created, giving an overview of sports opportunities at schools of Tartu.

In 2017 the college organised 80 different events and over 100 services targeted to the community that were participated by about 7000 members. Within one year the college introduced the study

opportunities and the curricula in 10 education fairs across Estonia and the doors were open to the visitor twice a year – in the spring and in the autumn. A potential learner can use the student shadowing opportunity throughout the year; that opportunity was used by 117 persons interested in student life. In 2018 about 60 events were organised by the college and community services were offered to about 5000 participants (see detailed overview of participated and/or organised events (in Est.).

Open college

The purpose of the open college is to provide lifelong learning in the form of continuing education. Provision of lifelong learning is an opportunity for self-development, improvement of knowledge and increasing competitiveness in the labour market. Continuing education is organised based on the Adult Education Act. The activity of the open college is organised by the continuing education specialist who carries responsibility for the administration, marketing and conduct of continuing education, as well as for the budget implementation and correctness of the documents issued to the participants of continuing education. Various in-service trainings are organised for health care institutions and persons as well as within state-commissioned education. Training is conducted by the teachers-practitioners of the college, professional training providers from different educational and health care institutions and international lecturers from partner universities. The activity of the open college is based on the rules (in Est.) adopted by the college council.

From 2015 the college takes part in the MoER project *Promotion of adult education and extension of learning opportunities* aimed to motivate adults to learn and create high-quality and flexible learning opportunities taking into account the development trends of the labour market. The project is targeted to the adults who do not participate in lifelong learning, but need it the most. In total 23 training courses were funded by the project in 2018 (2017 – 18, 2016 – 13). In addition, the college collaborates with the unemployment insurance fund that has funded the training of 35 persons in 2015–2018.

Based on the quality agreements signed with the practice bases, basic training for supervisors of practical training is provided by the college to the employees of health care institutions free of charge; 693 supervisors participated in basic training in 2014–2018. The follow-up training of supervisors was passed by 54 supervisors in 2015-2018; and the training course offered from 2017 on multicultural awareness targeted to the supervisors of international students was passed by 74 supervisors.

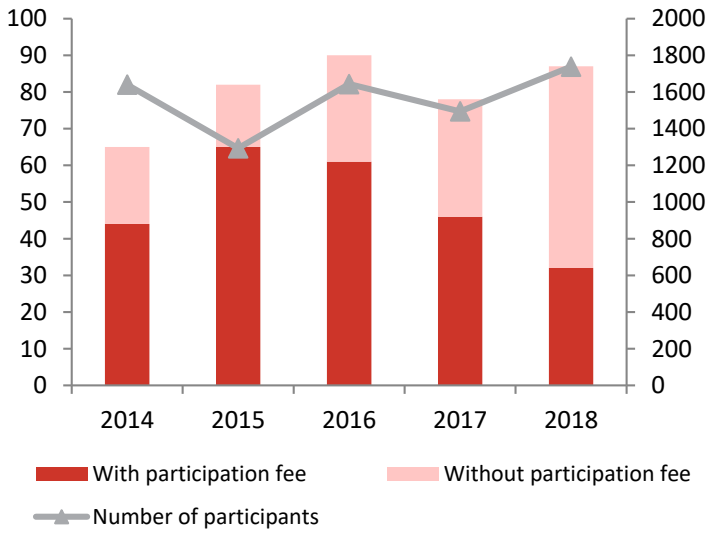
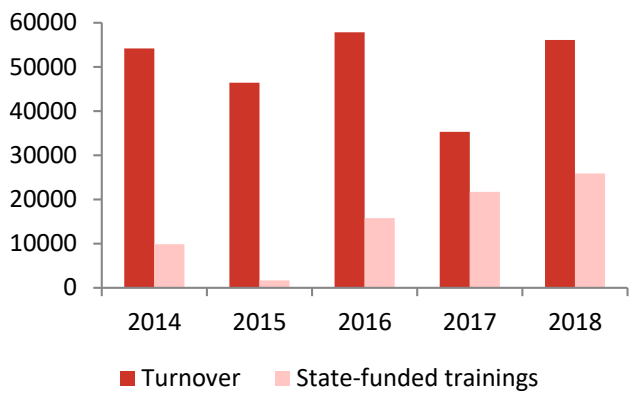


Figure 20. Number of in-service trainings and participants in 2014–2018

Turnover of the open college has been considerably stable in last five years (on the average, 50000 euros); the proportion of state-funded trainings to the turnover is increasing each year (Figure 20).



The number of participants in in-service trainings has been stable in recent years, but interest in state-funded trainings targeted to supervisors of practical training has significantly increased (Figure 21).

Figure 21. Continuing education budget in 2014–2018 (in euros)

Each year the list of offered training courses is extended based on the needs of the labour market and health care developments in Estonia. In 2016 six new training courses were developed (ABCs of diabetes, sport massage, physics in physiotherapy, stoma care, joint mobilisation techniques, implementation of NANDA I nursing diagnoses in nursing care). In 2017 for the first time training on *Conservative and Invasive (Dry needling) Physical Therapy of Myofascial Pain Syndrome* was conducted by international lecturers. In 2018, the provision of training courses (e.g. study of diseases and hygiene) for the providers of beauty services was commenced based on the proposal of the health board. From 2019, *Training for working environment representatives, working environment council members and working environment specialists* (24 hours) is offered by the open college in collaboration with Riskianalüüs OÜ, because pursuant to the Occupational Health and Safety Act a working environment specialist has to be employed by each enterprise. Due to this requirement there is a need to offer the training course to the employees and employers of South Estonia. Students of the college may participate in this training free of charge and receive elective subject credit points.

Feedback on the in-service training courses provided by the open college in 2016–2018 has mostly been positive. Based on the well-equipped skills labs at the college a lot of practical activities can be offered in trainings that are attractive for the participants and beneficial in their daily work. The feedback highlights among the strengths the professionalism of teachers and their ability to relate it to training; real life examples presented by the teachers are also named among the strengths. The participants of trainings are asked to propose topics for in-service trainings. Based on those proposals, new training courses are developed, for example, *Care of a client with diabetes* that is targeted to the care workers employed in health care and social welfare.

Strengths:

1. A well-functioning system for community services;
2. Provision of high-level continuing education that is in accord with the needs of society.

Improvement area: Better integration of study activities with the community services offered by the competence centre. **Planned improvement activity**: Development of the curricula and the organisation of studies in order to provide all learners with the experience of community service since 2021/2022.

4. SELF-EVALUATION OF HIGHER EDUCATION AND VOCATIONAL EDUCATION CURRICULA

Self-evaluation of curricula does not reflect the general processes of the college that form a basis for the operation of curricula and are described in chapters 3.1.–3.12. Self-evaluation of curricula describes only those activities and results that are characteristic to the particular curricula, supplementing the information given in the general part of the report.

4.1. CURRICULUM OF ENVIRONMENTAL HEALTH SPECIALIST

Name of curriculum, level of studies:	Environmental health specialist Professional higher education
Structural unit responsible for the conduct of curriculum:	Tartu Health Care College Study and research structure Physiotherapy and environmental health department
Main compiler of curriculum self-evaluation:	Anna-Liisa Tamm, *PhD* Head of department annaliisatamm@nooruse.ee, +372 737 0228

Curriculum background: in the 1940ies there were no epidemiology specialists and sanitary doctors in Estonia. In that situation it was necessary to educate medical staff with secondary education. In the course of time the title and content of the speciality has changed, e.g. the title “sanitaarvelsker” (sanitary medical assistant) was changed into “sanitaararsti abi” (assistant sanitary doctor) in the year 1966. In 1990 the instruction was terminated as there was no state-commissioned education. In 2002 education for environmental health specialists was commenced again, now at the level of professional higher education at Tartu Medical School.

Curriculum volume is 180 ECTS credits, with the standard period of study for 3 years.

4.1.1. PLANNING AND MANAGEMENT OF STUDIES

Curriculum management and development

The curriculum is led by the head of physiotherapy and environmental health department Anna-Liisa Tamm, *PhD*. The department includes 13.75 teaching positions, currently are filled 12 positions. These positions are filled by 15 persons as of 31.12.2018, incl. seven teaching staff members in the field of environmental health. In the department take place monthly meetings that are participated by teaching staff members of both curricula; the curriculum development and organisation of studies is performed in close collaboration of both curricula. Membership of the curriculum board (in Est.) is formed of the representatives of the employers and students. Development of the college curricula is conducted on the basis of common principles and regulations (see chapter 3.7.).

Feedback given by the employers and graduates is taken into account in curriculum development.

Examples:

- In 2016 the feedback given by the employers included a proposal to focus more on environmental management systems in subject *Environmental protection* as enterprises employing occupational health specialists often bring also in an environmental management

system and the occupational health specialist is expected to contribute considerably in this area. Based on the feedback the volume of the appropriate topic was increased in subject *Environmental protection* and a practical task was added, including analysis of the situation at the college and making proposals to the administrative and finance director about the promotion of environmental friendliness of the college;

- Graduates appreciate the curriculum in regard to topics on study of diseases, legislation, communication and risk factors as well as general practical skills, incl. presentation skills. They were less satisfied with the knowledge and skills acquired in relation to psychosocial risk factors, foreign languages, document management, data processing and ergonomics. Based on this feedback an elective subject was offered to students on the management of occupational safety documentation (2 ECTS credits). The elective subject course was conducted by Kristi Jõeorg, a graduate of the college with extensive professional experience in the field; the subject course was highly appreciated by the students. The content and teaching methods of ergonomics were reviewed and the syllabus was revised. The teaching staff members passed training on statistics, improving the level of data processing in the supervision process of final theses.

In the process of curriculum development and changing in 2016 two master's level programmes were thoroughly investigated, i.e. the master's programme in public health at the UT and the master's programme in ergonomics at the Estonian University of Life Sciences. The curriculum of EHS was compared with the curriculum of health manager (health promotion domain) at Haapsalu College and with the health promotion curriculum at TallinnHCC. In general, the results of analysis show that the curriculum of EHS provides a wider basis and the graduates have a possibility to continue their education at the level of master's studies. In addition, according to the results of interviews conducted with the employers (incl. main partners the Health Board, the Labour Inspectorate and the Veterinary and Food Board) the curriculum is in accord with the requirements of the employers. Feedback is collected regularly from different parties and due to a small number of students the teachers can get sufficient current feedback from students and from the supervisors of practice sites. Curricula content has been compared on the basis of single topics. For example, the comparison of microbiology content with the curriculum of sanitary engineers at the University of Ljubljana was necessary as a teaching staff member is invited as a visiting lecturer to conduct a public health subject course in the spring of 2019. In conclusion, the content and order of topics by years regarding microbiology courses is similar in different higher education institutions (year 1 – general microbiology, year 2 – clinical microbiology and after that a separate subject course on food microbiology).

The curriculum is relevant and in accord with the requirements of society. According to the Rahvastiku Tervise Arengukava 2020–2030 (in Est.) the health improvement of Estonian population is mainly targeted to the domains that the curriculum of EHS is focussing on: promotion of mental health, incl. reduction of psychosocial risk factors; prevention of work injuries; promotion of healthy life styles, e.g. balanced diet and physical activity; reduction of the use of psychotropic substances; prevention of communicable diseases and their spread, incl. immunisation and antimicrobial resistance; reduction of water related health risks, incl. in relation to bathing water, swimming pool water and drinking water; reduction of health risks related to indoor and outdoor air (incl. indoor climate), noise, and radiation; chemical safety and reduction of risks; product safety and reduction of risks, incl. cosmetic products, child care products and toys; safety of services and reduction of risks, incl. beauty and personal services, educational and social services. Based on the above mentioned document, we can state that our curriculum is very relevant and it can be expected that the relevant specialists in the national context may be required more than they are currently prepared. Topicality of the curriculum and the involvement of topics that are essential in society is evidenced by a high interest in the days of environmental health demonstrated by people outside the college, i.e. the lecturers are not asking for payment and listeners are numerous and from different fields. The

collaboration partners already know and wait for the information day on environmental health organised in September.

RDC activity in curriculum development

Participation of the teaching staff in the RDC activity at the college in general is described in chapter 3.5. The curriculum development is evidence-based and the conduct of research studies makes the teaching staff of environmental health experts in the field. All teaching staff is engaged in RDC activities that are purposeful and duly supported. All teaching staff members of the curriculum fulfil the role of the principal investigator for one or several research studies as of the beginning of the year 2019. The teaching staff members of the curriculum are valued as experts in scientific committees of international conferences, e.g. the docent of the curriculum was invited to a conference in Malaysia as a keynote speaker. Organisation of international student conferences at the college was initiated under the leadership of the curriculum teaching staff; the first conference took place in 2017. In order to develop the curriculum, the teaching staff members are conducting research in narrower fields of investigation. For example, drinking water is an essential issue in public health, forming also part of the environmental health domain of the Health Board. Due to the mentioned aspects three final theses have been written and defended within a research study on drinking water consumption habits among the Estonian population, the results of which are used in subjects *Drinking water quality and quality assurance* and *Quality and safety of drinking water*, the latter being an elective course attended by students from different curricula. Results of the study have also been published in a number of articles and introduced in conference presentations. The curriculum has close collaboration with enterprises, e.g. several studies have been conducted in collaboration with the Health Board or ordered by this board.

RDC activity facilitates the spread of information about the college and the search for motivated student candidates. For example, in recent years the teaching staff members and students have introduced in gymnasiums the following topics: e-cigarettes (Võru State Upper Secondary School), water and food hygiene (workshops in Põltsamaa Ühisgümnaasium), physical risk factors (Karlova Kool) and occupational health (Jõgevamaa Riigigümnaasium). In collaboration with the PT curriculum, practice weeks are organised for pupils who have chosen the medical pathway at Tartu Tamme Gümnaasium.

At the beginning of 2018 a 4-year health lab project was started in collaboration with five general education schools (Tamsalu Gümnaasium, Tapa Vene Gümnaasium, Tapa Vene Põhikool, Lehtse Kool, Jäneda Kool) where the teaching staff members are in the role of experts, leading the activities of working groups that are designing learning materials and guidelines for teachers and pupils to enable the assessment of health indicators in their study process. The students of the curriculum are purposefully engaged in the RDC activities, providing the graduates with essential experience in the planning and conduct of research and data analysis, as well as supporting their appreciation of lifelong learning. This is confirmed by the rate of our graduates who continue their studies and by the graduates' interest in the spread of the results of their final theses even after the graduation from the college. For example, several articles are published each year in the college collection of research articles or newspapers (incl. Postimees) based on the final theses of our graduates; the graduates' final theses have been awarded prizes in international student conferences and competitions of student works (e.g. in 2018 the final thesis *Parental beliefs and behaviours towards vaccination in Estonia* by our graduate Elisa Kender was recognised by Eesti Teaduste Akadeemia (in Est.) as the best bachelor thesis in the field of health studies).

Collaboration partners

The curriculum has a lot of good national collaboration partners and international collaboration is constantly increasing. International partners chosen for the development and implementation of the

curriculum are predominantly related to the field, topics and objectives of the curriculum. The main collaboration partners include the Health Board and the Labour Inspectorate in Estonia and international organisations like the EFEH and the IFEH.

The needs and wishes of interest groups are taken into account in the development and implementation of the curriculum and emphasis is paid to a wider promotion of the speciality, incl. to education of interest groups. One major partner is the Health Board.

Example:

- In 2016 the professional standard of EHS was compiled in collaboration with the Health Board and the Labour Inspectorate. In the autumn of 2016 the Day of collaboration partners was organised where the representatives of practice bases and partner schools were invited to. On that day the results of the research studies conducted on the curriculum were introduced, the research and training interests as well as the needs of partners were identified, and potential supervisors and reviewers of final theses were agreed on from outside the college. At the end of 2018 all final theses of the curriculum were reviewed by specialists from outside the college and more than a half of the final theses had a co-supervisor from outside the college.

In 2017 six interviews were conducted with a total number of nine collaboration partners/practice bases (incl. the Health Board, the MoSA, the Labour Inspectorate, OÜ Riskianalüüs etc.) and with nine graduates in order to get feedback on and develop the content of the curriculum (determination of a need for a master's level study related to the speciality or the field of environmental health, determination of topics insufficiently covered on the curriculum, determination of training needs of and collaboration possibilities with the graduates and collaboration partners). Results of the interviews demonstrated among other things that the topic of psychosocial risk factors needs to be developed in Estonia in general; the topic is planned to be integrated into the curriculum. It also became evident that the Health Board and other state authorities expect that their specialists' minimum educational level is a master's level education. Therefore, an aim was set on the curriculum to have more substantial collaboration with the higher education institutions providing education at an appropriate level in order to ensure our graduates' competitiveness for continuing studies at the master's level. In the autumn of 2018 collaboration was started with the UT (public health) and the Estonian University of Life Sciences (ergonomics) to identify the satisfaction with and expectations in relation to our graduates and to determine other collaboration possibilities. It became evident that both universities are very much satisfied with the content of our curriculum and competences of our graduates and the empirical final theses of our graduates are highly appreciated.

Internationalisation and substantial promotion of international collaboration are considered essential on the curriculum. For this reason the meetings organised under the leadership of the EFEH in spring and autumn are regularly participated by the teaching staff to be engaged in discussions on important topics of environmental health and public health. A general aim of the meetings is to inform about current issues; identify common investigation domains (dissemination of essential results) and share topics/methods; facilitate teacher and student mobility (e.g. due to the EFEH meetings a number of contacts have been made with lecturers from other countries who have taught our students on relevant topics in last three years, incl. food hygiene and food safety, indoor climate of schools and kindergartens, in total volume about 10 ECTS credits). In the spring of 2017 an EFEH seminar was organised in Tartu by the teaching staff of the curriculum. In addition, in September of 2018 an application was submitted to the IFEH for organisation of the fourth conference *IFEH Academic World Conference on Environmental Health 2021* in Estonia. A positive decision of the IFEH has been received and the organisation of the conference has started. The aim is to introduce within the conference our curriculum, college and country as well as the national

contribution to environmental health (incl. the World cleanup day, participation of inhabitants of Tartu in relation to the bioproduct mill etc.). The conference will help to make new contacts and find partner institutions in collaboration with whom to develop teaching and study, and to conduct high-level research in the field of environmental health.

Curriculum cohesion

Following the adoption of the updated curriculum in the summer of 2016 the learning outcomes, methods and assessment on the curriculum have been evaluated and considerably developed by the curriculum team within last three years. In 2016 common guidelines for final thesis were prepared in collaboration with the PT curriculum and adopted. That formed a basis for a common and substantial development of the research domain of two curricula. Currently the students of the two curricula are supervised by the teaching staff of both curricula without any difficulties. Since 2017 all students of the curriculum have been engaged in research studies conducted on the curriculum within the subject of research methods (in the volume of 0.5 ECTS credit of the total volume of the subject), e.g. students are entering the data collected within different research studies, assisting in different measurements etc.

The curriculum team in close collaboration with national and international partners is monitoring the developments in the specialist field that form a basis for the review and revision of the syllabi, study content, planning of final theses and research studies, the presentation of research results to a wider audience (incl. the community); based on research results revisions are made in relevant subjects (incl. new elective subject courses offered to all students of the college, development of study materials like the creation of 17 study videos on vaccination (in Est.) available to anybody interested in the topic).

Horizontal cohesion as well as vertical cohesion of learning outcomes in the curriculum is provided in Appendix 1. Teaching and assessment methods are diverse and up-to-date. Theoretical studies precede practicums and practical training, and prerequisite subjects precede specialist subjects; a logical order of topics/subjects is provided by regular collaboration of the teaching staff members and by the timetable. The evaluation of vertical and horizontal cohesion is conducted currently and continuously and ensured by the competence of the teaching staff members who acquire the relevant competence either individually in a specific training course or in joint training sessions. Each academic year feedback on subject courses is obtained from the students, forming a basis for analysis and conclusions, the results of which are discussed in the teaching staff meetings and development interviews.

Supporting the development of general competences within the curriculum

Update of the curriculum in 2016 included an addition of a subject *Entrepreneurship and career planning* that is important for our students as some of them enter into private enterprise. Development of this competence is supported by practical training in private enterprises, providing an understanding of internal processes of private enterprise and increasing motivation for practising in this field. The students' interest is also supported by the practitioners' participation in teaching (e.g. the graduates and employers speaking about the speciality in subject *Introduction to the speciality*).

Study methods support the acquisition of the following competences: presentation, teamwork, communication, self-direction, problem solving (e.g. solving scenario-based tasks in subject *Epidemiology*) and creativity. For example, planning a health promotion project in teamwork where students via brainstorming identify one health problem and one factor influencing this problem, and develop an intervention in order to influence this factor. Students also implement the intervention developed by them. For example, in the toy museum hand washing was taught, problems (tooth

brushing, diet) related to tooth hygiene were explained and demonstrated interactively. A workshop for elementary school children on the principles of food safety, including attractive practical tests, was prepared and is still organised by the college. Training about ergonomic techniques was organised for the employees of small shops. A public seminar was organised on the topic of alcohol where students from gymnasiums were invited. The seminar included presentations by the experts and practitioners of alcohol prevention; a film on alcohol prevention was demonstrated. An intervention for kindergarten children was designed to teach a proper use and avoiding excessive use of smart devices. Several videos have been created on the prevention of health problems. See also chapter 3.12.

Major curriculum changes of three last years

In the academic year 2015/2016 a thorough analysis of the curriculum content was carried out and in the spring of 2016 the updated curriculum was adopted by the college council.

Input for curriculum changes was as follows:

1. Recommendations made in the assessment report of the EKKA evaluation committee of the health care study programme group;
2. Feedback by students, graduates, (visiting) lecturers and collaboration partners forming a basis for the revision of content and volume of different subjects (e.g. *Construction projects and plans, Water safety and quality of bathing water*), and addition of one subject *Therapeutic exercise* (2 ECTS credits) to the curriculum, providing an environmental health specialist with a basis for a more effective assessment of problems caused by forced positions;
3. The pedagogical board decision on harmonisation of the volume of research methods and final thesis at the college and the addition of subject *Entrepreneurship and career planning* (2 ECTS credits) in order to support the development of general competences;
4. Changes to the work domains of the Health Board, e.g. the domains of child care institutions and social welfare institutions were merged into one sphere of responsibility of the Health Board.

The most essential change was the increase of the volume of practical training (by 10.5 ECTS credits) necessary for the achievement of required learning outcomes and the conduct of practical training in the spring semester to facilitate student mobility based on the Erasmus+ programme. First students who have studied on the basis of the updated curriculum are graduating from the college in the spring of 2019, but current feedback already demonstrates student satisfaction with a considerably increased volume and experience of practical training, providing them with confidence while entering the labour market.

Strengths:

1. Curriculum development is supported by research studies in the specific field of environmental health, involving the collaboration partners and the students; results of the research studies are published in high-level journals and presented at conferences;
2. The curriculum is relevant; the needs of society and the employers are flexibly taken into account in curriculum development based on the feedback.

Improvement area: current collaboration takes place within the department, but according to the development plan of the college, it is necessary to develop interprofessional training in collaboration with other curricula. **Planned improvement activity:** in 2020, the development of an elective interprofessional subject is commenced, involving all curricula.

4.1.2. LEARNING, TEACHING AND ASSESSMENT

Supporting student abilities and development, alternative choices on the curriculum

Individual abilities and needs of students are taken into account and their development is supported in teaching and study. The number of students on the curriculum is small and therefore the teaching staff members have sufficient time to implement individual approach to a student and give additional explanations on complicated topics/processes, if required. For example, students who have previously learned German can take a course of English for beginners; at first, the study literature in German is recommended to them for use. The teaching staff and students appreciate the process of final thesis preparation that is carried out in collaboration of all teachers and students of the curriculum, beginning with the identification of a topic in the second year, writing and defending the project until the defence of the thesis (if required, writing an article or preparing a presentation after graduation). A topic of final thesis is chosen by a student based on their interests and also abilities. A topic for and a site of final practical training is organised according to a student's intentions in relation to their future job. In recent years, several students have been employed by the time of their final practical training, giving them an opportunity to have this practical training at the future employer's. In the course of counselling on study-related issues different student needs are identified (incl. a need for psychological counselling, an individual study plan etc.) that are taken care of by the specialist of academic affairs in collaboration with the head of department or a student is referred to the relevant specialist. An individual study plan has supported an increasing number of students to complete their studies in case they are taking care of small children, for example.

Based on student feedback, the teachers are duly taking into account the individuality of students (incl. the diverse level of students' prior knowledge); students' different abilities and preparation are considered in the organisation of teaching and study.

Examples:

- Based on feedback of several past academic years, an elective subject *Basis for chemistry* was introduced in 2016, forming a prerequisite subject for subjects *Biochemistry* and *Chemical risk factors and toxicology*. Introduction of this elective subject was based on the evidence that students' knowledge of chemistry acquired at gymnasium was at different levels and they had difficulties with the achievement of learning outcome in biochemistry;
- An elective subject *Basis of laboratory work* provides future supervisory officials with a better understanding of laboratory methods and the nature of the determination/measurement process;
- An elective subject of the Estonian language (a language programme) is offered, but in a couple of recent years there has been no need for it on the curriculum of EHS;
- Teachers provide individual consultations at the date/time agreed on with a student;
- More capable/active students have an opportunity to represent the college in different events, incl. conferences;
- Shadowing of active students;
- Student-athletes participating in competitions have an opportunity to sit exams or submit their written papers on the dates determined in their individual study plan.

Students have alternative choices, an opportunity to influence the content and organisation of their studies. Students can choose elective and optional subjects in the volume of 10 ECTS credits; they can select a topic and site for their final practical training as well as a topic and supervisor(s) for their final thesis. For the achievement of learning outcomes and performance of independent learning assignments a student can use different materials suitable to them (suitability of the language, paper or digital version etc.). In different subjects a student can choose a topic for the independent

learning assignment that suits him or her the best (e.g. in subject *Cell biology and genetics* a topic is chosen by a student based on their personal interests – GMO, cloning, eugenics, epigenetics, a genetic disease or a chromosomal disease).

Students' evaluation of alternative choices on the curriculum: students would like to have more speciality-specific elective subjects in a wider variety or an opportunity to make their choices in the spring semester and in the autumn semester, but due to a small number of students not all places of an elective course would be filled, making the organisation of this kind elective courses very expensive. Information about elective courses meant for all students of the college is available on the intranet, but according to student feedback there are too many information channels and it may happen that they read the information about an elective course when there are no vacant places any more available or the subject course has already started.

Elective subjects
Elective subjects and their topics on the curriculum have been chosen in order to support students' personal as well as specialist development, considering also the wishes of students and recommendations of the graduates/employers. Elective subjects are partly related to the competences of our teaching staff and to the new knowledge obtained from the results of research studies (incl. elective subjects on the safety of drinking water, ergonomics and security equipment for children). Students' active participation in Environmental Health Days or thematic conferences is also considered as a form of elective subject and recognised in a relevant volume of credit points.

By the spring of 2019, e-courses in English are prepared and opened on the curriculum that can be taken by international students at our college as well as by our college students as elective subjects:
- *Health risks caused by environmental changes,* 2 ECTS credits;
- *International development trends in health protection,* 2 ECTS credits;
- *Security equipment for children,* 2 ECTS credits;
- *Drinking water,* 2 ECTS credits;
- *Different aspects of microbiology,* 1 ECTS credit.

Study content, study methods and assessment
Teaching and assessment methods
The choice of study and assessment methods is diverse and justified. Student feedback and proposals are taken into account and they are discussed in the teaching staff meetings and development interviews. The use of study methods at the college in general is described in chapter 3.8. The choice of methods depends also on the specific features of a study group and on annual student feedback on a subject. Visiting lecturers need guidance in the study process planning, incl. in drawing up a syllabus, and this guidance is a task of the head of department. The teaching staff members have created a number of study materials on health protection, facilitating the achievement of learning outcomes, e.g. in the autumn of 2017, 14 video lectures and 6 educational films were created on the topic of vaccinations. According to the student feedback different study methods are used by the teachers, the choice of which is appreciated by the students. Students have also expressed their opinion that teachers carry out assessment objectively, following the assessment criteria.

Examples of improvement activities conducted on the basis of student feedback:
- A question was raised about the relevance of some lectures. According to students' proposals those lectures were substituted by video lectures or seminars;
- According to students' evaluation, they were not sufficiently encouraged to discuss and talk in some seminars. Students' proposal was taken into account and more discussions are planned to be conducted in studies.

Integration of digital devices into the study process, supporting a contemporary approach to learning and teaching at the college in general is described in chapter 3.8. The use of digital technologies in teaching and study is sufficient; the teaching staff members are competent to use them. All subjects have e-support, educational videos are frequently used to illustrate theoretical principles and facilitate understanding of the more complex processes. Those videos are mostly in English and their retrieval requires the implementation of different digital competences. The digital documentation of practical training (practice book) is under development. Teachers have had guidance on the creation of video lectures in order to provide students with an opportunity to manage their time more efficiently. In the teaching staff meetings at least three trainings are annually planned on the development of digital competences (e.g. in the autumn of 2018: creating video lectures, preparation of slide shows, development of digital practice books).

Based on students' evaluation, the teaching staff members are digitally competent. Students' evaluation of their own digital competences shows that their competence levels are very different and there is a need for some additional training on the use of the word program, for example, to facilitate the performance of independent learning assignments as well as the final thesis by them. At the same time the use of digital devices in teaching and study should not be increased in their opinion.

Supervision of and feedback on independent work
Student assignments are supervised and feedback is provided, independent work of students is comprehensively supported either in written form or orally by the teacher, depending on an independent learning assignment; either individually or in a group based on different guidelines (e.g. guidelines for written papers or final thesis) and using different environments for this purpose. For example, in subjects *Cell biology and genetics* and *Environmental protection* feedback is given on an e-learning environment Moodle. In addition, self-assessment tests are used where immediate feedback is given to a student by a computer, providing them with a basis for identifying how well their learning is progressing. Presentations made in the course of studies are followed by discussions, involving also feedback on the presentation given by the teacher as well as by the fellow students.

Example:

- the supervision of a research study/final thesis is carried out within the whole period of writing the final thesis. A topic for the final thesis is chosen in the second year, facilitated by a thematic seminar where are introduced the research studies being conducted on the curricula of PT and EHS, as well as the topics of final theses proposed by our collaboration partners and the teaching staff members. The students have an opportunity to choose a topic among the proposed ones or have a topic totally based on their own interests. After the choice of a topic a supervisor for the thesis is chosen, in which students get help and counselling by the teacher of research methods and the head of department. In the course of project writing for the final thesis a student gets continuous feedback from the supervisor(s). The defence of projects for final theses in the second year is participated by all teaching staff of the curriculum, assisting in the identification of the most suitable research methods for the topic. For example, in case of a survey questionnaire, the team helps to identify a standardised questionnaire or compile a proper and feasible questionnaire. In the spring of the third year, the pre-defence of final theses takes place where feedback is again given by the whole teaching team as well as by the fellow students. A high level of final theses is demonstrated by different prizes awarded to the theses. The students of the environmental health speciality are recommended to carry out empirical final theses as this type of studies is appreciated on the admission to master's studies (during an admission interview).

Practical training

Volume of practical training is big on the curricula of professional higher education (39 ECTS credits on the curriculum of EHS), making the choice of practice institutions essential. There are about 40–50 practice institutions on the curriculum which are chosen based on the possibilities to achieve the learning outcomes/objectives. Student feedback on the effectiveness of their practical training forms an important source of information in the choice of practical bases. Study visits, involving explanations given by specialists, play an important role in the completion of the curriculum in order to integrate theoretical knowledge with practice. Student feedback on study visits has been very positive for years as it makes learning more diverse and widens the horizon in general in addition to the integration of theory with practice.

Each practical training session is supervised by a teacher who has close collaboration with a practice institution in the particular field. Learning outcomes of practical training are sent to the practise institutions and possibilities for their achievement are discussed with a supervising teacher from the college. As in 2016 several new practical training sessions were added to the curriculum and the volume of some practice sessions was increased (resulting also in changes to learning outcomes) a training course is organised for supervisors of practical training in May 2019, incl. the introduction of an electronic practice book.

From 2016 a period of practical training with sufficient length is organised in the spring semester to give an opportunity for practical training abroad based on the Erasmus+ programme. Provision of this opportunity has demonstrated that the students are interested in practical training abroad and the use of this opportunity is increasing on the curriculum of environmental health specialist. Teachers' duty within the organisation of practical training abroad is to support and counsel a student.

Implementation of the RPL principles is regulated by the RPL procedure established by the college (see chapter 3.9.). Most of the applications on the curriculum form recognition of prior learning as part of curriculum (80-100%) (Figures 22 and 23).

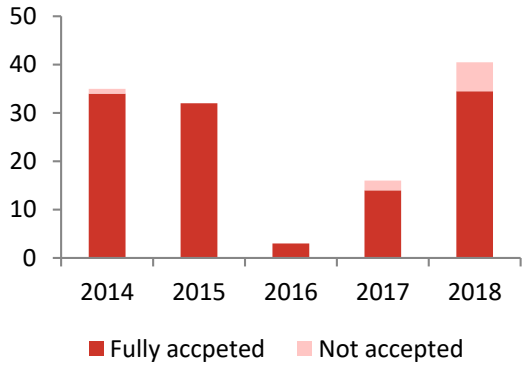


Figure 22. RPL statistics (in ECTS) in 2014–2018

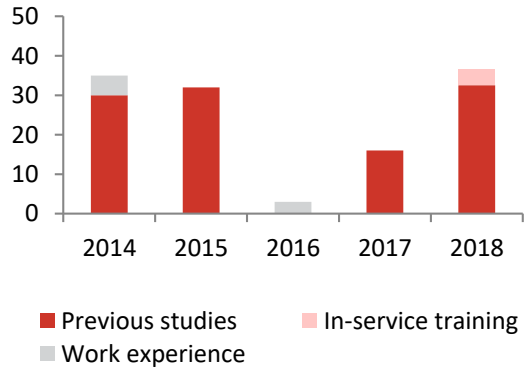


Figure 23. Implementation of RPL (in ECTS) in completion of curriculum in 2014–2018

Alumni

Graduates of the curriculum are successful in the labour market and the majority of them are employed in the specialist field, a number of them are working in leading positions of different state authorities and private enterprises. A considerable number of graduates are currently entering into private enterprises in the position of a working environment specialist or some other specialist. Several state authorities require a master's level education from their employees, but our graduates'

competences are highly appreciated and several graduates of our curriculum are filling specialist positions having the diploma of professional higher education.

40 persons have graduated from the college on the curriculum of EHS in the years of 2015 to 2018, out of whom 30 are employed, 21 are employed in the specialist field and five graduates are on parental leave (as of 31.05.2019).

In order to develop the curriculum, feedback is asked from the graduates of the curriculum. When we are informed about the most common positions that our alumni are filling we can organise meetings for giving appropriate information about these positions to our students and invite our alumni to give information on different topics within specialist subjects and topics. These thematic days are essential in order to increase students' motivation to study and ensure their employment in the specialist field.

Example:

- in 2016 we investigated the current knowledge of our alumni and the results showed that a lot of them are continuing their studies and an increasing number of graduates are going to private enterprises. Based on this result a subject *Entrepreneurship and career planning* (2 ECTS credits) was added to the curriculum and collaboration was commenced with the higher education institutions providing master's level education to promote our graduates' competitiveness in admission to master's studies.

Examples of curriculum development based on alumni feedback:

- increasing the volume of some practical training sessions (e.g. *Water, Infectious diseases and epidemiology*);
- addition of new practical training sessions in the first year (*Risk factors,* 3 ECTS credits);
- merging repetitive topics (e.g. merging the topics regarding child care institutions and social welfare institutions into one subject as they belong under the same surveillance);
- development of the domain of psychosocial risk factors and organisation of the relevant in-service training.

Majority of the changes made to the curriculum are based on alumni feedback as our alumni are the employers for our present graduates. The aim of the curriculum is to adapt to and comply with the needs and wishes of the employers.

Strengths:

1. Based on student evaluation, the individuality of students is comprehensively taken into account by the teachers;
2. A high level of student involvement in the conduct of research studies and a high level of research studies that is evidenced by national and international recognitions.

Improvement area: the volume of practical training on the curriculum has increased, the effectiveness of which should be evaluated on the basis of graduate and employer feedback. **Planned improvement activity:** analysis of the impact due to an increased volume of practical training is commenced in 2019, when the first group of students studying according to the changed curriculum is graduating. **Improvement area:** the students expect to have more diverse elective subjects. **Planned improvement activity:** extending the choice of elective subjects based on e-learning, including international subject courses in English to support the development of general competences (involving international students).

4.1.3. TEACHING STAFF

The curriculum comprises a sufficient number of highly qualified teaching staff. There are seven members of teaching staff whose principal job is on the curriculum of environmental health specialist, including three members with a doctoral degree and one member currently having doctoral studies (Table 14).

Table 14. General data of teaching staff of EHS curriculum as of 31.12.2018.

	Posts (persons)	*PhD*	Master's degree	First level of higher education
Docent	1 (1)	1	-	-
Lecturer	2.5 (3)	-	3	-
Assistant	2 (3)	1	1	1
Teacher	-	-	-	-

Age distribution of the teaching staff is relevant for us – we have teachers with extensive professional experience and also young and enthusiastic teachers. Each teaching staff member has developed their own role in the team, supporting the development of the whole team. The curriculum is aimed at continuous education and training (incl. postgraduate studies) of teaching staff. Collaboration is effective in case of common aims and targets are set for the curriculum development and for individual development. Meetings of the teaching staff take place at least once a month, where the performance is reviewed and new plans are made.

A number of teachers have part-time employment at the college or are at the same time employed by a practice institution or by another educational institution, facilitating high level collaboration in the field of research studies. Several specialists in the field are involved in teaching as visiting teaching staff members coming from practice institutions, networks or based on conference contacts. They are mainly planned to teach subjects/topics that are very specific or require practical experience in the field in order to teach. The role of teachers from other countries has increased (during last three years at least two lecturers conducting elective subject courses in the volume of 3 ECTS credits, in total 10 ECTS credits). Teachers from other countries are mainly needed in the areas where the number of relevant specialists in Estonia is very limited and an intention to develop the topic is justified. For example, a need to develop the domain of topics related to psychosocial risk factors was determined in 2017 based on discussions with the alumni and employers.

During development interviews conducted with the teaching staff members, the student feedback on subject courses is discussed and recorded in the minutes. The teachers make conclusions about the implemented methods, topics and assessment based on the student feedback. For example, based on student feedback one of the teachers was recommended to pass a training course providing advanced dietary knowledge, preparing the teacher for an additional future teaching position in a continuing education course to be organised by the college. Initial evaluation of teaching is given by the students, and based on the feedback available in the SIS, the evaluation is given within a development interview. Within the development interview the plan for the academic year is reviewed and the performance is evaluated; new plans are made, incl. training needs. Elections of *the Colleague of the Year* and *the Teacher of the Year* are important.

Training needs (incl. a need for training in a work environment) are firstly identified by a teacher, the time and place for training in a work environment is planned in collaboration with the head of department within a development interview. The training in a work environment is followed by self-analysis that serves as a basis for the review of relevance of topics in the subjects taught by the teacher. The experience gained in the work environment is shared by the teacher in team meetings.

For example, in 2017 one teacher passed training in the department of environmental health of the southern service of the Health Board with an aim to obtain an overview of the work of a health care inspector, to participate in the inspection of objects, filling in acts, getting familiar with different databases and participate in water sampling. The gained knowledge and experience were implemented in the subject on drinking water. In the spring semester of 2018, one teacher had practical training in TUH, spending 20 hours at the work environment specialist's and 20 hours in the Labour Inspectorate with an aim to get an overview of a work environment specialist's activity, the surveillance of occupational health and participate in the inspection of different objects. The acquired knowledge and experience were used in the review and revision of relevant subjects and was shared with colleagues in the team meeting. Additional value of training in a work environment passed by the teaching staff involves the development of closer collaboration with the authorities, institutions and organisations that serve as practise bases for our students.

International activity of the curriculum has been active in recent years, supporting duly the development of the curriculum. For example, the teaching staff of the curriculum is regularly participating in the work meetings and conferences organised by the EFEH with an aim to introduce research results and the college. Our teachers have been invited to participate in scientific committees of conferences and one teacher is teaching microbiology to health protection students in the Faculty of Health Sciences of the University of Ljubljana, Slovenia, in the spring of 2019. An aim for next academic years is to visit our Erasmus+ partner institutions and their practice bases, e.g. a visit to Escola Superior de Tecnologia da Saude de Coimbra in Portugal and the University of Ljubljana in Slovenia in the spring of 2019.

The teaching staff of the curriculum participated in an international multicultural NordPlus project (Estonia, Latvia, Lithuania) in the academic year 2017/18. Cases of multicultural situations were collected in different higher education institutions, the summary of which is provided in a handbook in English compiled within the project and that can facilitate the solution of problems at the college related to cultural diversity issues.

Strengths:

1. A strong team, all members are engaged in the conduct of research, training and community service activities;
2. The teaching staff has a wide range of competences, evidenced by offering diverse elective subjects across the college and the conduct of expert analyses carried out in different fields (e.g. vegetarianism, vaccinations etc.).

Improvement area: as the size of the team is small, teaching staff members with a scientific degree are needed to ensure the sustainability of curriculum development and updating, as well as the internationalisation, research and development activities. **Planned improvement activity:** supporting the postgraduate studies of the teaching staff, recruiting international lecturers for teaching in the fields, where the number of specialists in Estonia is limited.

4.2. CURRICULUM OF BIOMEDICAL LABORATORY SCIENCE

Name of curriculum, level of studies:	Biomedical laboratory science Professional higher education
Structural unit responsible for the conduct of curriculum:	Tartu Health Care College Study and research structure Radiography and biomedical laboratory science department
Main compiler of curriculum self-evaluation:	Zinaida Läänelaid Head of department siinalaanelaid@nooruse.ee, +3727370227

Curriculum background: in the 1940ies there was almost no medical staff with secondary education in Estonia, for example, there were fifteen laboratory technicians in the year of 1945. But this type of staff was needed and the curriculum of BMLS has been built up on the curriculum of medical laboratory assistant opened at Tartu Medical School (the name of Tartu Health Care College at that time) in the academic year 1945/1946. From 2002 the curriculum is named the curriculum of BMLS and the education is provided at the level of professional higher education. In 2005 the curriculum was given full accreditation. From the autumn of 2017 the teaching and study on the curriculum of biomedical laboratory science is conducted in Tallinn.

The curriculum volume is 210 ECTS credits; the standard period of study is 3.5 years.

4.2.1. PLANNING AND MANAGEMENT OF STUDIES

Curriculum management and development

The curriculum is led by the head of radiography and biomedical laboratory science department Zinaida Läänelaid. The department includes 14.5 positions, currently are filled 11.75 positions. These positions are filled by 22 persons as of 31.12.2018, incl. seven teachers in the field of BMLS. In the department take place regular teaching staff meetings that are participated by all teaching staff members of the curriculum; the curriculum development and the organisation of studies is performed in collaboration of the teaching staff members. Membership of the curriculum board is formed of the representatives of the employers and students. The process of curriculum management and development is planned, systematic and continuous, enabling to receive feedback on the performance of planned activities and the conduct of additional activities for curriculum development, if required. Development of the college curricula is conducted on the basis of common principles and regulations (see chapter 3.7.).

Curriculum development is participated by the students, teaching staff, supervisors of practical training, employers and representatives of the professional association. Curriculum development is a continuous process based on the results of internal evaluation.

Internal evaluation is based on:

- student feedback;
- employer feedback (once a year in the curriculum board);
- feedback by the representatives of the professional association (once a year in a planned joint seminar);
- recommendations made in the assessment report of the EKKA evaluation committee of the health care study programme group;

- feedback by a curriculum development working group (e.g. in 2018–2019 a working group regarding the development of instruction on microbiology, involving the representatives from all microbiology laboratories of health care institutions, and the microbiology teachers of the curriculum);
- recommendations given by European professional associations.

Examples of curriculum development based on employer feedback:

- Based on the estimation provided by the employers, about 50% of staff members currently employed by the laboratories do not have the education required for working in a laboratory as a biomedical laboratory scientist, and the turnover rate is above the average among the staff members without the qualification of biomedical laboratory scientist. Based on this feedback a study group of biomedical laboratory science was opened by the college in 2016, targeted to the persons without the required education employed by the laboratories of health care institutions. Instruction of this study group is organised in sessions;
- The minutes of the curriculum board in 2016: Within five coming years the hospitals in Tallinn will have to employ a big number of new biomedical laboratory scientists as the number of vacancies is growing due to the staff members who are retiring or leaving to be employed in the private sector. Only about 50% of the staff members employed by laboratories in Tallinn have the required specialist education. There is a need for training of the staff members employed in laboratories in Tallinn who do not have the qualification of biomedical laboratory scientist. Based on the employer feedback negotiations with the representatives of bigger hospitals in Tallinn were started and in the academic years 2017/2018 and 2018/2019 the instruction is organised in Tallinn. The opening of study groups in Tallinn is supported by the Association of Estonian Biomedical Laboratory Scientists (hereinafter *EBLS*) as well as by the Estonian Society for Laboratory Medicine.

Example of curriculum development based on student feedback:

- Students expected a more coherent approach to topics included in subject *Basis of laboratory work* (8 ECTS credits), making proposals to extend the study period and make re-arrangements in the timetable of this subject. They also pointed out that the exam included some issues that had not been covered by the instruction (knowledge of chemistry and biology provided in gymnasium). Based on the feedback, the teaching staff members analysed the student knowledge that should have been acquired at the previous level of their education and was needed for the completion of the particular subject, specifying a gap of the knowledge. As a result, the content of the curriculum elective subject *Basis of chemistry* was revised by increasing the volume of organic chemistry, decreasing the volume of inorganic chemistry and adding an elective subject *Biochemistry*. Cohesion of different parts of the subject was also analysed, resulting in a need to reduce the subject volume by 0.5 ECTS credit in order to decrease the repetitions. Based on the student feedback, the tasks for independent learning were modified to support the understanding of the connections between the knowledge obtained in gymnasium and the specialist knowledge based on those prior knowledge. The formulation of assessment was revised to make it clear and univocal.

The change of the professional title from *laboratory technician* (in Estonian “laborant”) into *biomedical laboratory scientist* (in Estonian “bioanalüütik”) has not been accompanied by an active and attractive informing of the public, and young people are not familiar with the job of the biomedical laboratory scientist. This job and its content are not generally depicted in films, serials and fiction books. Due to the above situation an external communication plan was designed by the curriculum in collaboration with partners in order to disseminate information about the specialist field and study opportunities of biomedical laboratory science, e.g. health awareness days for gymnasiums, shadowing a biomedical laboratory scientist in laboratories of health care institutions

and staff members at the college, celebration of the international day of biomedical laboratory scientists at the college and in health care institutions meant for the public and gymnasiums, promotion of study opportunities at the college in one of the largest shopping centres of Tallinn.

Example of collaboration with partners:

- In 2018 the representatives of the curriculum participated in the review and revision the professional standard of biomedical laboratory scientist carried out by the Estonian Qualifications Authority; and in 2019 the college is applying for the right to award the profession. Before the application submission in November 2019, the curriculum needs to be updated and improved. Based on the above mentioned situation changes need to be made to the curriculum, meaning the review of the whole curriculum from the aspect of coherence. The changes to the curriculum are planned to be made in the academic year 2019/2020.

A need for master's studies was analysed in collaboration with the UT and the Association of EBLS based on the feedback given by the evaluation committee of the study programme group in 2016, but considering a limited size of the target group it is not planned to open master's studies for biomedical laboratory scientists in coming years. In 2018 the exchange of information was started with the UT and EBLS on the development of the master's programme in biomedicine currently run by the university in order to make it more appropriate to the graduates of the curriculum of biomedical laboratory science.

Within five last years the European Association for Professions in Biomedical Laboratory Science (hereinafter *EPBS*) has compared the curricula of biomedical laboratory science in Europe based on the volume, the level of education and the level of higher education. The situation regarding the education of biomedical laboratory scientists in Europe is very diverse, ranging from vocational education provided for example in Spain to bachelor and master's levels for example in Austria and the UK. According to recommendations of the EPBS, the education should be provided at the first level of higher education with the duration of four years. The content of the curriculum at the college is comparable with the curricula of educational institutions in Europe, although there are differences in the volume of some subjects. Therefore, the knowledge and skills of students are comparable and students can perform practical training in different institutions in Europe.

The curriculum is relevant and in accord with the development trends in society. The curriculum is going to be relevant also in coming years due to a growing trend of the total number of laboratory investigations and the amount of vacant positions of biomedical laboratory scientists in the laboratories of all health care institutions, and the number of vacancies is considerably increasing in near future due to the retirement of a number of laboratory staff members. A need for qualified biomedical laboratory scientists is also increasing due to the introduction of new laboratory investigations, proportional changes of current investigations and an increasing use of point of care or bedside testing (POCT) performed outside the laboratory.

Research and development activity in curriculum development

Participation of the teaching staff in the research and development activity at the college in general is described in chapter 3.5. Research and development activity on the curriculum supports the development of the curriculum and internationalisation. In the spring of 2019 four long-term research studies are being carried out on the curriculum where students are involved. Results of the research studies are used for the development of subject content and for preparation of elective subjects, the developed guides are used as aids in the organisation of students' independent work. Students' final theses are conducted within the research studies of the curriculum. Research results are published in journals and presented in conferences, incl. in journalistic publications, to promote the public awareness of health issues.

Examples of research activity used for curriculum development:

- Within testing the methodology of skills labs of BMLS (2014–2020) were made 3 oral presentations, 1 publication and 14 final theses. Methodological guides prepared within the research study are used during practicums and more importantly they are used by students in independent training of test performance;
- Point-of-care testing in family doctor practices in Estonia (2012–2013), in hospital practices (2013–2014) and in care home practices of South-Eastern Estonia (2015–2018) LINK25, including 5 oral presentations, 3 poster presentations, 3 publications, 5 final theses. Based on the research study an elective subject course was prepared for the students of the curriculum and in English for international students;
- Prevalence of enterobiasis in kindergarten children (2012–2017), in Jõgevamaa (2012–2013), in Viljandimaa and Tartumaa (2013−2014), in Raplamaa (2015–2016), in Harjumaa (2015–2017), including 4 oral presentations, 1 poster presentation, 5 publications, 4 final theses, 3 times covered in media. Results of the study were used for the development of subject *Parasitology*;
- Borrelia burgdorferi sensu lato carrying and the representation of different genotypes among ticks of Estonian counties, including 2 poster presentations, 1 publication, 3 final theses; one student presentation was awarded the third prize in the competition of student poster presentations in Dublin, one final thesis was awarded the third prize in a national competition of student research organised by the MoER.

The teaching staff members of the curriculum participate in national and international projects. **Examples:**

- A teacher of the curriculum participated in an international project EBreast led by the college where a module on an interprofessional approach to early detection of breast cancer was prepared. The modules developed within the project are in English and can be used by interested parties outside the college;
- Since 2014 health awareness workshops for gymnasium students have been organised under the leadership of the curriculum teaching staff within a project funded by the Gambling Tax Council;
- From the spring of 2019, the curriculum is contributing to the implementation of a public procurement organised by Eesti Noorsooühing aimed to popularise the curriculum of biomedical laboratory science by organising virtual reality workshops.

We evaluate the content and extent of the RDC activity in the curriculum development as very good; it supports the revision of subject content, has given learning materials for supervised independent work and extended the range of elective subjects for the college students as well as for international students. The engagement of the teaching staff in the RDC activity has reached its maximum and the volume of research is optimal.

Collaboration partners

The curriculum has very good collaboration relations with national and international partners. For example, in the years 2018–2019 a curriculum development working group was run on the curriculum, involving 12 members from all microbiology laboratories of health care institutions and the microbiology teachers of the curriculum.

The collaboration with international partners is diverse. One focus of internationalisation is the collaboration aimed at facilitation of student mobility on the curriculum. For example, the collaboration with Oulu University of Applied Sciences was targeted to the identification of institutions for practical training where the relevant learning outcomes could be achieved and a 3-party assessment of practical training could be carried out. As a result of collaboration the teaching staff members of the college have been visiting partner institutions since 2018 to evaluate the

conditions for the achievement of learning outcomes on practice sites and at the same time carrying out a 3-party feedback on student performance.

Curriculum coherence
General learning outcomes of the curriculum and learning outcomes of the modules are coherent and in accord with the requirements established by the Higher Education Standard. Coherence of the curriculum is ensured by a continuous and systematic development of the curriculum. Feedback on the curriculum is collected with the help of surveys from the students and graduates, from the representatives of the employers in the curriculum board and from the supervisors of practical training. The teaching staff members give their feedback on the curriculum during development interviews.

Examples on the division, sequence and cohesion of subjects:

- There is horizontal cohesion between subjects of *Anatomy-physiology* and *Histology* in the first study year, where the histological detection of tissues and organs with the help of microscopic techniques is studied;
- A subject following in the second year provides vertical cohesion of the knowledge and skills acquired in *Histology* with *Pathology* subject where the microscopic and macroscopic pathological processes of the organs and organ systems are studied, associating them with common diseases. *Pathology* is followed by subject *Pathology laboratory technology,* where the preparation of histological and cytological samples is studied, including critical evaluation and analysis of the quality of the prepared samples as well as working in a team;
- The third study year includes *Cytology*, one of the subjects in the pathology module, including the identification of pathology on the basis of cytological samples. Finally, within practical training all the acquired knowledge and skills are applied in clinical settings.

Examples on the improvement of curriculum cohesion based on feedback:

- In the academic year 2017/2018 it appeared that the expectations of supervisors of practical training on microbiology exceeded the actual skills of students. In 2018 a working group was formed by the curriculum, engaging the representatives of microbiology laboratories of health care institutions and the teachers of the curriculum. From 2018 to 2019 the working group analysed and improved the learning outcomes of microbiology established for practical training in different study years, following the principle that the tasks performed during practical training should become gradually more complicated. The working group also analysed the connection between the achievement of learning outcome of practical training and the content and volume of *Microbiology* subject, as well as the content and volume of basic subjects required for successful performance of practical training. One essential proposal of the working group was to change the location of pharmacology studies within the curriculum, including also the specification of the relevant topics to be covered (antibiotics and antibiotic resistance). Based on the proposals changes were made to the curriculum. Based on the results of the working group activity we can assume that the employers' expectations in relation to our students' skills are in accord with the actual knowledge and skills acquired by the students.

Supporting the development of general competences within the curriculum
The curriculum includes several subjects the completion of which supports duly the development of transferrable knowledge, skills and attitudes, e.g. *Communication psychology, Social psychology, Conflict psychology, Philosophy and ethics, Academic reading and writing, Basis of research, Management, Entrepreneurship.*

Students are involved in different ways in the organisation of the college events, developing the students' creativity and initiative as well as their communication and teamwork competences.

Examples on student involvement:

- the organisation and conduct of the events related to the researchers night festival by the Science Centre AHHAA;
- the organisation and conduct of the International day of BMLS;
- the organisation and conduct of health awareness days.

See also chapter 3.12.

Major curriculum changes of the last three years

- According to the EPBS recommendations on the minimal amount of practical training carried out in clinical settings the volume of practical training was increased, forming now 25% of the total volume of the curriculum. At the same time the volume spent on pre-clinical training in clinical chemistry and pathology was decreased. Observation practice was added to the curriculum for first year students;
- The development of teaching methods involved an increase of the amount of e-learning courses (in total nine subjects in the volume of 25.5 ECTS credits, the amount of teaching via videoconferencing increased about 25% due to the instruction carried out in Tallinn and in sessions. Five teaching staff members started to use video lectures within four subjects;
- To improve the teaching of general competences on the curriculum the psychology studies were reviewed and revised, removing *General psychology* subject and starting with *Communication psychology* in the first year, followed by *Social psychology* (with an emphasis on teamwork) and *Conflict psychology*. *Developmental psychology* and *Crisis psychology* were added to the list of elective subject courses.

Strengths:

1. The curriculum development process is planned, systematic and continuous, enabling the collection of feedback on the effectiveness of planned activity implementation and the conduct of additional curriculum development activities, if needed.
2. The curriculum is developed and implemented in collaboration with the employers, collaboration partners in health care institution laboratories and higher education institutions abroad.

Improvement area: in 2018 the professional standard of biomedical laboratory scientist was updated; due to the standard revision, the cohesion between the curriculum and the professional standard should be analysed and a required curriculum revision performed. **Planned improvement activity**: drawing up an action plan for 2019/20.

4.2.2. LEARNING, TEACHING AND ASSESSMENT

Supporting student abilities and development, alternative choices on the curriculum

Students' different needs and preparation are taken into account in the process of studies. To even up the levels of prior educational preparation some basic subjects of the curriculum are conducted in the way of elective subjects (e.g. *Basis of chemistry, Biochemistry, Russian language, Estonian language)*, learning skills are developed in an elective subject *Self-direction.* Based on their individual learning needs, the students can practice their skills in the college skills labs within independent work. Depending on the topic, the students can use the appropriate guides or educational videos for their independent practising of skills. Pre-registration for the use of a skills lab is needed in order to ensure the presence of the supervisor in case a student has questions within their independent practising. Group works are a good way to discuss with fellow students the issues that can be solved in different ways, some of which may be quite complicated. This way the skills of different students (managers, teachers, learners) are implemented. Devices of social media are used in teaching and study. The teachers give continuously feedback on student papers, tasks and demonstrated skills. In

case a student has to re-sit an exam or pass/fail assessment a consultation is offered first. Video lectures have been on the topics that are more complicated. An individual study plan can be drawn up for students who are talented or quick at learning.

A student is given feedback on their learning by formative assessment and self-assessment. In case a student has problems in relation to their studies counselling is given by the studies specialist on potential solutions of the problems. Consultations by the psychologist are available to students. The organisation of studies is flexible, enabling the combination of working for economic reasons and studies at the college.

Students can apply for the recognition of prior learning and professional experience, taking into account the fact that quite many students admitted to the college have formerly studied in different educational institutions or have professional experience. According to an individual study plan, the students can apply for the performance of practical training during the summer holidays.

Elective subjects
The volume of elective subjects established by the curriculum is 10 ECTS credits. Elective subjects are prepared and offered considering different aspects and all students have an opportunity to make their choice from a sufficient number of subjects. The planning of elective subjects is based on the following principles:

- To provide deeper specialist knowledge and skills (e.g. *Introduction to bioenergetics, Measurement accuracy);*
- To develop general knowledge and skills (e.g. *Crisis psychology, Self-direction*);
- To inform about current and new trends in the specialist field (e.g. *Point of care testing);*
- To teach the integration of specialist knowledge and skills in the applied field of the study pathway (e.g. *Applied microbiology*);
- To explain the current issues in society (e.g. *Lifestyle drugs, Introduction to prebiotics and probiotics*);
- Topics related to health and wellbeing of students (e.g. *Aromatherapy, Massage*).

For international students there are elective subjects in English, giving information about Estonia.

Examples:

- *Parasitological situation in Estonia*, 1 ECTS credit (M.Remm);
- *Point-of-Care Testing,* 1 ECTS credit (A.Orav, M.Remm);

Study content, study methods and assessment
Teaching and assessment methods
Diverse study methods are used in the conduct of teaching and study, including classical study methods as well as modern active learning methods; academic lectures as well as enhanced lectures are in use. Classical practicums are used alongside with practicums with a problem-based structure. Individual work is increasingly substituted by group work in seminars. The method of Journal Club is used in the subjects regarding research methods. In 2019, an interprofessional subject course is going to be developed on the topic of laboratory testing to be organised in collaboration with the students of the MW and N curricula.

The implementation of blended learning at the college in general is descried in chapter 3.8. Different possibilities of digital studies have been integrated into the study process, mostly in the form of e-courses and courses with e-support. These study methods provide the students an opportunity to manage their time for studies in a way that suits them the best.

Assessment tasks are developed by a subject teacher, in a number of subjects assessment tasks are developed by a team of teachers. The clarity of assessment is ensured by the description of the assessment method and assessment criteria in a syllabus. In the development of assessment tasks it is essential that the assessment involves the relevant knowledge and skills the acquirement of which is expressed in learning outcomes. It is essential to assess what has been taught, incl. the implementation of the acquired knowledge and skills in a new situation. The objectivity of assessments is ensured by giving the same assessment tasks to all students (due to a small size of student groups it is possible to ensure that the content of assessment tasks is not spread from student to student). Assessment criteria of an assessment task have been developed and provided in an assessment sheet. There is an assessment sheet for each student that is introduced to a student after an exam. Based on the formative assessment a student can plan their independent learning according to their individual needs, incl. the development of practical skills.

Supervision of and feedback on independent work
There are guidelines for the conduct of all independent learning assignments that are available to the students in the SIS. A syllabus includes a description of an independent learning assignment, including all the deadlines and assessment criteria. The guidelines include information about how to have contact with the teacher in case there is a need to discuss the questions related to the performance of the assignment.

The teachers give feedback in different ways, depending on the structure of the subject and the nature of the task. In some subjects the feedback to students or a group of students is given by the teachers before the presentation of the task in seminar or submission of the task on Moodle. This is a purposeful activity, giving a student sufficient time for improving their work and finding appropriate answers to the questions. The provision of feedback in this way is essential when the tasks are also visible to other students on Moodle. Sometimes the students get feedback after their presentation in seminar; in that case the aim is to assess the ability of a student to answer the questions without any special preparation time. In both cases the feedback on the student task is also given by other students; sometimes a group of students gives feedback on a task in the form of a review.

The student feedback on the process of final theses preparation is good. In some cases they think that their need for supervision is bigger than 30 hours that is established in the guidelines for final theses. A student and the supervisor conclude an agreement about a good supervision practice, including, for example, the responsibilities of both parties in the work process, the meeting of deadlines etc. It is clearly stated in the agreement that a student takes responsibility for their studies. The supervision experience of the teachers shows that the time management by students and their ability to meet the deadlines has improved in recent years.

Learning environment
The learning environment of the college is duly supporting the implementation of different study methods and the investment planning is following the principle that step-by-step all skills labs should have modern equipment for the conduct of practicums in the specialist fields. For example, in 2017 a skills lab for pre-clinical training of blood sampling was equipped; 2018 – a haematology and clinical chemistry skills lab; 2019 – a microbiology skills lab; 2020 – a pathology skills lab and 2021 – a skills lab for molecular diagnostics.

The skills labs used by the curriculum are study labs equipped considering the number of students on the curriculum, ensuring an effective use of the skills labs. The skills labs can be used for independent learning and practising of skills in case there are no scheduled teaching and study. The skills lab for blood sampling is also used for the conduct of training of students from other curricula

of the college (e.g. nursing and midwifery) and the skills labs of pathology, microbiology, molecular diagnostics and chemistry are also used for the conduct of studies of students of environmental health.

The requirements of occupational safety are constantly followed in the study process. Occupational safety principles are taught to students in *Basis of laboratory work*; on completion of the topic on working environment the students have a test that has to be passed successfully. Before first practical training the students have to study once more the safety guidelines in the skills labs, pass an instruction and sign the relevant safety document, confirming that they know the safety requirements. The students pass a similar procedure before first practical training of each laboratory field. The safety instructions are available to the students of the curriculum in all the skills labs. Waste handling in the laboratory is taught to the students in subject *Working environment* and the relevant instructions are available in the quality manual and in a place visible to students. An instruction is followed by signing the relevant document, confirming that they know the waste handling rules.

Practical training

The volume of practical training of the curriculum is 46 ECTS credits. Practice bases of the curriculum in Estonia have been categorised on the basis of the complexity level of practical training sessions. For example, practical training for first year students takes place in local and general hospitals, practical training for second year students in central hospitals and practical training for third year students in regional and bigger central hospitals. The choice of practical training sites abroad is based on the possibility to achieve learning outcomes and the opportunities of the particular institution.

Assessment of student performance in practical training is based on the learning outcomes described in the practice book. Each student has a supervisor of practical training and a supervising teacher from the college. A student fills in the practice book on Moodle during their practical training, giving the supervising teacher an opportunity to monitor the achievement of learning outcomes by a student and the progress of practical training. The digital practice book includes a forum where the teacher and a student can communicate or, if required, use emails. Within three last days of practical training a student is given feedback on their achievement of learning outcomes and learning during practical training by a 3-party assessment. A 3-party assessment may take place in a face-to-face meeting or with the help of ICT technology, depending on the conditions suitable to all parties.

Implementation of the RPL principles is regulated by the RPL procedure established by the college (see chapter 3.9.). In about 60% of the cases, the RPL system has been used for recognition of prior learning as part of the curriculum (Figures 24 and 25).

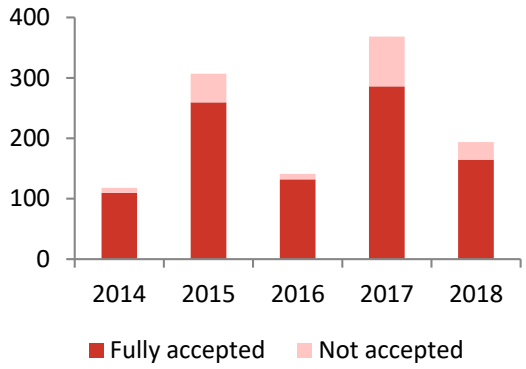


Figure 24. RPL statistics (in ECTS) in 2014–2018

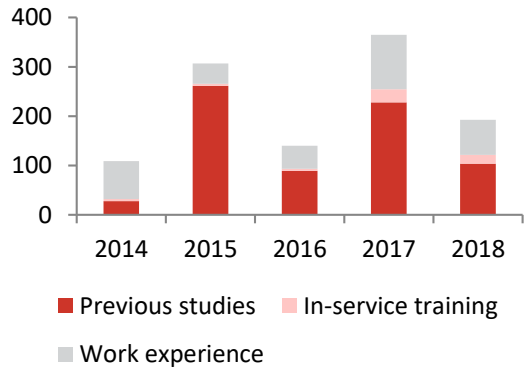


Figure 25. Implementation of RPL (in ECTS) in completion of curriculum in 2014–2018

Alumni

In order to facilitate the development of general competences of the students and increase the competitiveness of the graduates they are guided and supported to take part in national competitions as well as in international competitions organised by the EPB where the students of the college have been awarded prizes. The student works have been submitted to national competitions where a student of the curriculum was named a laureate. The students of the curriculum have made presentations in the international student conference of the college where they have also been awarded prizes. The students are consulted by the teaching staff members in preparation of presentations based on the student needs.

The employers are satisfied with the preparation of the graduates of the curriculum and their employment rate is high. For example, 40 persons have graduated from the college on the curriculum of biomedical laboratory science in the years of 2016 to 2018, out of whom 28 are employed in the specialist field, 8 continue their studies and two went abroad. One graduate of the curriculum started master's studies in Sweden in the academic year 2018/2019.

Strengths:

1. A very good learning environment with modern equipment and learning materials as well as the support by the teaching staff, enabling the students' independent learning and training according to their individual needs;
2. The graduates are competitive and expected specialists, a high employment rate and continuation of studies among the graduates;
3. Sustainable planning of long-term investments that ensures the quality of studies;
4. Readiness of the teaching staff for international collaboration in the organisation and assessment of practical training for students.

Improvement area: implementation of flexible forms of study based on the employer need. **Planned improvement activity:** to analyse the opportunities for workplace-based study in biomedical laboratory science training. **Improvement area:** based on the development plan of the college, extending the opportunities for interprofessional training. **Planned improvement activity**: in 2019/2020, a subject is planned to be conducted jointly involving nursing and midwifery students on the topic of laboratory testing. **Improvement area:** blended learning options should continuously be developed due to the studies taking place outside Tartu. **Planned improvement activity:** to plan

development activities and continuing education of the teaching staff based on the student and teacher feedback.

4.2.3. TEACHING STAFF

Teaching staff of the curriculum includes seven members: one with a doctoral degree, three with a master's degree (incl. one teacher currently having the 2nd year of doctoral studies) and three members whose educational level is equal to a master's degree (Table 15).

Table 15. General data of teaching staff of BMLS curriculum as of 31.12.2018.

	Posts (persons)	*PhD*	Master's degree	First level of higher education
Docent	1.75 (2)	1	1	-
Lecturer	0.5 (1)	-	1	-
Assistant	3.5 (4)	-	4	-
Teacher	-	-	-	-

Two teachers have completed the curriculum of biomedical laboratory science at the college. Two teachers are employed in a health care laboratory, in addition to teaching at the college. All teaching staff members have taken several courses on teaching and learning.

The membership and structure of the teaching staff is in accord with the needs of the curriculum and suitable for the achievement of the curriculum objectives. All teaching staff members have a qualification enabling their participation in the research and development activities in addition to teaching. As the number of students on the curriculum is small, the size of teaching staff is sufficient for the achievement of the objectives determined in the development plan of the college, i.e. 10.58 students per teaching position in the autumn semester and 8.72 students per teaching position in the spring semester after the graduation of the fourth year students (including the students on academic leave). The average age of teaching staff members is 49 years, ranging from 65 to 30 years. It means that teaching staff includes only one member who is at the retirement age, but whose contribution in the position of docent is valuable for the head of department, colleagues and students. Three teachers in their fifties continue working at least for a decade before their retirement, members in their forties have about twenty years to work until their retirement and the youngest member of the teaching staff is having her third academic year as a teacher at the college. She is only starting her teaching career and will have sufficient professional experience until the next young teacher will be employed by the curriculum.

Each academic year teaching staff members evaluate their results on the basis of the teacher's competence model and student feedback. Development interviews are meant for drawing up plans for next academic year and a teacher determines and prioritizes their development objectives. A teacher's need for training courses or training in a working environment is approved in the development interview. All teaching staff members who are not employed in a laboratory of a health care institution have to pass training in a working environment in the volume of 40 hours after every three years. A report is made to the teaching team on the experience gained by a teacher in the working environment training.

Teaching staff members of the curriculum form a strong team, sharing similar understandings of teaching, learning and the role of the teacher, as well as following the basic values of the college in their professional activity. Therefore, the teaching staff members are willing to collaborate in the development of the curriculum, teaching and assessment methods, supporting each other in teaching. The collaboration of the teaching staff with the teachers from other curricula is substantial,

including the conduct of interprofessional studies in collaboration with nursing and midwifery teachers in subjects *Basis of nursing* and *Venepuncture*. All teaching staff members have close collaboration with the partners in health care laboratories of Estonia within the supervision of students' practical training.

The docent is representing the curriculum in specialist networks, participating also in the EBLS. The aim is to be informed of the current trends in the specialist field, share the information with other members of the teaching staff and implement the obtained information and knowledge in the curriculum development. She also informs the members of the specialist association about the developments at the college. There is a good practice on the curriculum to present the results of final theses in the professional association. The docent represents the curriculum in the European association of BMLS.

The teaching staff members conduct research in the same area what they are teaching (e.g. the pathology teacher's research area is related to parasitology and the microbiology teacher's research area is related to microbiology). The teacher of subjects related to the laboratory quality system is responsible for the quality system of the skills labs of the curriculum, including the development of the quality manual for the organisation and evaluation of the relevant work. He is also the President of the Association of Estonian Biomedical Laboratory Scientists. The teaching staff members contribute to the work of a specialist journal *Eesti Laborimeditsiin* published by the Estonian Society for Laboratory Medicine and the EBLS.

Strengths:

1. The teaching staff has motivation to develop, resulting in a reasoned identification of a need for in-service training and training in a working environment; the principle of lifelong learning has been adopted;
2. The research and development activities of the curriculum are in a good balance with the teaching staff resources and support comprehensively the implementation and development of the curriculum.

Improvement area: the teaching staff members with a scientific degree are needed to ensure the sustainability of curriculum development, internationalisation, research and development activities.
Planned improvement activity: continuous support for postgraduate studies of the teaching staff (currently one teacher is continuing doctoral studies).

4.3. CURRICULUM OF MIDWIFERY

Name of curriculum, level of studies:	Midwifery Professional higher education
Structural unit responsible for the conduct of curriculum:	Tartu Health Care College Study and research structure Nursing and midwifery department
Main compiler of curriculum self-evaluation:	Saima Hinno, *PhD* Head of department saimahinno@nooruse.ee, +3727370225

Curriculum background: due to a need for educated midwives a school for midwives was founded by Professor Chr. Deutsch at the obstetric clinic of the UT in 1811 which is considered as the predecessor of Tartu Health Care College as well as the MW curriculum. In the course of time the curriculum content as well as the professional title have changed, although the year 1811 can still be considered as the very beginning of MW education. Due to full accreditation in 2004 and a change of the institutional status from a vocational education institution into a professional higher education institution the graduates of the MW curriculum are awarded the diploma of professional higher education. From 2017 the graduates of the curriculum are awarded the profession of midwife, level 6, and they also have the competences required for working as a general nurse. The graduates register themselves at the National Register of Health Care Professional as midwives and also as nurses.

The curriculum volume is 270 ECTS credits with the standard period of study 4.5 years.

4.3.1. PLANNING AND MANAGEMENT OF STUDIES

Management and development of studies
The curriculum is led by the head of nursing and midwifery department Saima Hinno, *PhD*. The department includes 35.5 positions, 30.5 positions are filled by teachers with an employment contract and the rest of the positions are filled by teachers with an authorisation agreement.

The management and development of the curriculum is supported by monthly meetings of midwifery teaching staff. The joint curriculum board of the MW curriculum and the N curriculum involves the representatives of the employers, students and professional associations from the fields of midwifery and nursing, e.g. the EMWA, the ENU, the UT as a collaboration partner, TallinnHCC and the Estonian Patients Union. Students of the curriculum are student members of the EMWA and their representatives are involved in the activity of the working groups (e.g. the ethics working group) and the council of EMWA.

The development of curricula at the college is conducted on the basis of common principles and regulations (see chapter 3.7.). The curriculum is developed in accord with the following documents: national source documents, the development plan of EMWA, the strategic plan for nursing and midwifery in Estonia (2011–2020), the professional standard and the relevant international source documents (e.g. ICM – essential competences 2018, Annex five 2017, extension of the EU directive).

Inputs for the development of MW curriculum involve the following:

1. the development trends in the organisation and administration of the health care system as well as social and political changes;
2. the changes resulting from of the EMWA and the professional standard;
3. the EU directives and their supplements in order to ensure the compliance of the curriculum with the EU requirements and the free movement of specialists within the EU. In addition, changes to the curriculum are made due to the revisions made in national framework documents;
4. Recommendations made in the assessment report of the EKKA evaluation committee of the health care study programme group;
5. feedback by the students and employers on the curriculum and the study process.

The feedback from the employers and the collaboration partners is generally obtained through the curriculum board, in the collaboration meetings and in the supervision process of practical training.

Examples of curriculum development based on employer feedback:

- Analysis of the recording cards used in practical training and the opportunities for a purposeful organisation of practical training (2016/2017). According to the EU directive a graduate of the MW curriculum should have sufficient practical experience, for the documentation of which recording cards have been introduced, providing a midwifery student an opportunity to document their professional activity and reflect on their performance. According to the EU directives about 300 recording cards should be filled in to keep records of practical experience, but the recordings of the cards and self-reflection included substantial shortages mainly due to lack of time. In order to make practical training more effective the documentation requirements were revised, including the reduction of the number of recording cards to be filled in, but the documentation and reflection quality was expected to become considerably better as correct filling in of MW documentation is an essential competence and also an obligation established by legal acts. As a result of the development, the students can focus first of all on practical training and not so much on filling in formal recording cards. The whole practical experience is registered in the practice book as required by the EU directives;
- The revision of the table of MW activities (revision in 2017/2018) is aimed to aggregate all practical MW skills to have an overview that is recorded within the whole period of studies. During specialist practical training sessions the supervisors assess the students' performance level of practical midwifery skills (independent performance or performance assisted by the supervisor) and confirm it by signing and stamping.

Examples of curriculum development based on student feedback:

- Interim and final seminars of practical training involving the students and the supervisors (interim seminars since 2015/2016) are aimed to support the students' personal and professional development (e.g. practical training sessions *Maternity care I* and *Maternity care II*). During specialist practical training sessions the students encounter for the first time cases of normal delivery as well as different obstetric pathologies, for coping with which a student needs psychological support by their fellow students, supervisors of practical training and supervising teachers from the college. In an interim seminar the students reflect in a non-judgemental atmosphere on the situations they experienced regarding the association of theory with practice, giving them an opportunity to perceive better the level of professional responsibility and to be safely integrated into the professional activity;
- Community service of the curriculum is predominantly related to the preparation and conduct of a cycle of lectures targeted to expecting families. Feedback given by the participants has been positive and supporting the students, i.e. 96% of the respondents evaluated the approach to and sequence of topics as appropriate and necessary; 82.5% answered that all covered topics were beneficial and facilitated their preparation for delivery and parenting. Proposals were made and

the appropriate new topics were added to the programme, e.g. potential pregnancy risks related to pets (cats and toxoplasmosis) and safety issues regarding infants (incl. shaken child syndrome). Collaboration with the students of the environmental health curriculum was started to further develop the topic of safety and security of newborn babies, infants and toddlers.

The curriculum is relevant and in accord with the needs of society:

- at the national level, based on the consensus agreement approved on 15.11.2016 the number of students admitted to the MW curriculum is increased to 30 students per academic year in the period from 2016 to 2020;
- the extension of the midwives' sphere of responsibility and the optimum use of their competence at different health care levels;
- based on the data of EMWA, about 40% of the currently practising midwives are retiring in next 5 to 7 years, making the preparation of the required number of qualified midwives essential.

The MW curriculum is popular among student candidates and the admission competition has been high for years, on the average 6 candidates per student place.

RDC activity in curriculum development

Participation of the teaching staff in the research and development activity at the college in general is described in chapter 3.5. The RDC activity as well as international collaboration support the development of the curriculum. An emphasis is paid on student engagement in RDC activities, to ensure that the students' choice of topics for final theses would provide evidence for the development of the profession and the curriculum.

Examples of final theses defended on the curriculum in 2016–2018 that are related to curriculum development:

- *Self-assessment on achieving ICM core competencies among midwifery pre-graduates in Tartu Health Care College in years 2012–2016*;
- *Involvement of fathers in maternity care* – in collaboration with the MW network of Nordic countries Nordejordemodern.

In addition, three research studies have been carried out on the curriculum, involving eight students. As of the spring 2019, one research study is being conducted on the curriculum in the field of MW and the curriculum is participating in the conduct of one research study regarding all curricula of the college on *Learning and the factors influencing learning in practical settings*, providing data for the analysis of midwifery student' learning in the settings of practical training.

The teaching staff members of the curriculum have actively managed (e.g. DeDiWe, Muddie) and participated in different international projects:

- Project *The Developer of Digital Health and Welfare Services 2015–2018 (DeDiWe)* – designing a curriculum. The aim of the project was to develop learners' digital competences in an international interprofessional team. Five students and two teachers of the curriculum participated in pilot testing of the curriculum in 2016. After completion of the project an international elective subject course was carried out in 2017- 2018, involving seven students and two teachers of the curriculum. One final thesis was compiled within the DeDiWe project that was related to the objectives of the project and the curriculum content – *Mobile application's theoretical model to support women with gestational diabetes mellitus*, defended in January 2019;
- Project *Multiprofessional Digital Developer (Muddie)* has been carried out for two years in collaboration with Finnish and Latvian partners, involving the organisation of international

intensive courses. For example, in 2017 an intensive course *Customer oriented service design in digital health and welfare* was organised under the initiative of MW teaching staff at THCC;
- *E-Breast* project – two teachers of the curriculum contributed to creation of the project content, the results of which have been implemented in a subject on gynaecological diseases of the N curriculum and the MW curriculum.

The teaching staff members of the curriculum participate actively in the intensive programmes, focussing on cultural diversity in N and MW that are organised by international partners, e.g. from the year 2015 in Ghent, Belgium, and in 2016 in Coimbra. The experience and knowledge gained about multicultural MW is implemented on the curriculum within subject *Internationalisation of midwifery.*

Examples of RDC activities at the national level:
- The conduct of a clinical audit *The quality of independent antenatal midwifery care* in collaboration with the Estonian Health Insurance Fund, aimed to evaluate the compliance of the antenatal midwifery care with the current guidelines and the compliance of documentation with the legal acts;
- Participation of two MW curriculum teachers in the conduct of an educational project *Guiding breastfeeding and the integration of supporting of systematic collaboration at the primary care level* in collaboration with the EMWA and the Gambling Tax Council.

The teaching staff members of the curriculum contribute to the dissemination of research results at national and international levels.

For example, three presentations have been made at international conferences within last three years:
- EMA 2016 – *Attitudes to normal delivery among the midwives of maternity departments of hospitals in Estonia*. One poster presentation and one article published in the collection of research articles of the college;
- ICM 2017 – *Perceptions of preparation for childbirth amongst educators and participants*, *experience of normal delivery among the midwives of maternity departments of hospitals in Estonia*;
- ELACTA 2018 – *Baby Friendly Hospital Initiative: mid-term evaluation of the implementation of the Breastfeeding Strategy*.

Examples of community service within teaching and study:
- Since 2011 a cycle of 8 to 13 lectures targeted to the education of expecting families have systematically and regularly been carried out by the midwifery students under supervision of the teaching staff, forming part of teaching and study. The number of participants and the volume of lectures have been growing within the years, e.g. in 2012 the cycle of lectures was conducted once, but since 2014 the lecture cycle has been conducted two or three times in an academic year by engaging into professional activities the third and fourth year midwifery students, who are taking a cycle of nursing subjects. More frequent conduct of the cycle of lectures has increased the number of participants as follows in 2014 – 48; 2015 – 87; 2016 – 98; 2017 – 134; 2018 – 196. The interest of participants has gradually been growing and the reliability of the education provided by us is evidenced by the fact that expecting families taking the educational programme for expecting families in the Women's Clinic of University Hospital are also recommended to take part in the lecture cycle at the college.;
- Participation in the conduct of health promotion projects gives an opportunity to contribute to the improvement of health awareness of the population (kindergarten children, learners of basic schools and gymnasiums). The students have an opportunity to perform within a project the

professional activities acquired in the course of studies, e.g. teaching how to wash hands, a girl becoming a woman, adolescent hygiene;
- A workshop *Informed choices of intimate hygiene* were prepared in collaboration of the teachers and students of the curriculum within the health awareness days targeted to students of gymnasiums and the general public. In addition, a number of different topics have been prepared to disseminate midwifery-related information, e.g. *Safe sexual intercourse and intimate hygiene, Risk-taking sexual intercourse*.

Taking into account the fact that the MW curriculum comprises one full-time lecturer position, the amount of research and the extent of national and international activity can be evaluated as optimum.

Collaboration partners
The curriculum has a number of national and international partners in collaboration with whom the development of the profession and the curriculum are carried out.

Examples of collaboration with national partners in curriculum development
- Collaboration with TallinnHCC – a representative in the curriculum board, the representatives participating in the seminar/defence of final theses, the representatives of both colleges are engaged in the working groups of research and education in preparation of a new national strategic plan for nursing and midwifery etc.;
- The teaching staff members participate in the development of new strategic plans of the EMWA and the ENU;
- Active collaboration with EMWA gives the midwifery students an opportunity to take part in the training courses organised by EMWA; these trainings are recognised in the completion of the curriculum based on RPL;
- Regular meetings with the representatives and supervisors from the practical training bases, e.g. in 2017 the South-Estonian Hospital, in 2018 Pärnu Hospital, in 2019 Viljandi Hospital, the East Tallinn Central Hospital. The aim of the meetings is to consolidate the substantial collaboration between the college and the hospitals, offer support to the supervisors of practical training in relation to teaching, giving and receiving feedback, conducting final assessment and filling in the documentation about practical training;
- The teaching staff members of the curriculum conduct continuing education courses for the representatives of other fields through the open college, e.g. a training course *Delivery outside a hospital* was given for the ambulance service staff members in Tartu and Valga, 1/3 of the training involving theoretical principles and 2/3 of the volume of the training involving simulation based training on practical implementation of initial manual techniques and for gaining experience of the whole process. Feedback provided by the participants was positive and complimentary.

In collaboration with the Women's Clinic of TUH *Breastfeeding strategy 2014–2019* was drawn up in 2013. By now a new working group has started the preparation of a strategy of the next period, involving two teaching staff members of the curriculum. The required theoretical part and practical skills have been added to teaching and studies. For example, in subject *Study of breastfeeding,* attention is paid on the development of practical recommendations and skills to ensure guidance of mothers on how to start with breastfeeding, how to induce the milk flow from the breast by rubbing and relieving techniques in case of milk engorgement in the breast or a clogged milk duct.

The choice of international partners is based on the needs of the curriculum, e.g. teaching on particular topics, study methods. In 2017, collaboration was started with the Arcada University of Applied Sciences on the implementation and development of simulation based education and

training on the MW curriculum. The teaching staff members of the curriculum have participated in the introduction of the simulation training centre and the curriculum development in Arcada. One teacher from the Arcada University of Applied Sciences in collaboration with our teaching staff conducted a practicum involving simulation based training on pathological delivery. International collaboration involves also student mobility, students passing practical training abroad based on the Erasmus+ programme, research collaboration in the Nordejordemorden network and contributing in collaboration with partner educational institutions to joint intensive programmes *Multicultural nursing and midwifery.*

The teaching staff members of the curriculum have participated as experts, for example, in the work of the advisory body *The Estonian Committee on Breastfeeding Promotion* of the MoSA, in guideline working groups of the Estonian Health Insurance Fund etc.; this experience has been shared with colleagues from other countries. For example, in May 2017 the curriculum was visited by 50 midwives from Latvia with an aim to have an overview of midwifery education and clinical MW practice.

Several teachers from other countries have been engaged in the conduct of teaching and study on the curriculum. The number of teachers from other countries and the volume of teaching conducted by them are increasing slowly but continuously. Annual volume of teaching in English conducted by teachers from other countries is about 6 hours. The teachers of other countries are continuously consulted regarding the topics of teaching methods and the organisation of practical training (e.g. collaboration with the Nordic Network for Midwifery Education/Nordejordemodern, participation in the councils and education working groups of the European Midwives Association and the International Confederation of Midwives (hereinafter *ICM*). In coming years more emphasis will be paid on an active involvement of international colleagues as experts, creating conditions for their contribution to teaching on the MW curriculum.

Curriculum cohesion

In collaboration with the EMWA council the horizontal and vertical cohesion of the curriculum is analysed, including the compliance of learning outcomes with the professional standard requirements and the labour market needs; it is also analysed whether the learning outcomes can be achieved and the professional development ensured.

Learning outcomes are formulated in a learner-centred way. The connections between the objectives and learning outcomes of the curriculum and the modules are clear; the division of subjects into modules is purposefully justified. Diverse study and assessment methods are implemented, e.g. to connect theoretical knowledge with practice, case-based tasks are solved either theoretically or in combination with components of simulation based training. Self-reflection and continuous feedback by the teachers are essential in order to acquire midwifery skills and develop professionally. Theoretical studies precede practical training and the midwifery activities that are relevant for the particular practical training session are trained before practical training in the skills labs of the college either as separate skills or as complete midwifery cases. Conditions for an access to the summative assessment of each specialist module are described in a syllabus. For example, to pass successfully module *Maternity care* I, a student should first pass the following subjects *Normal delivery, Normal puerperium, Study of breastfeeding, Pharmacology, Nursing activities II* and practical training *Maternity care I.* Professional development is supported by subject *Fundamentals of midwifery* that is taught in parallel with theoretical studies.

After the completion of each specilist module the students give feedback orally as well as in written form in the SIS. The student feedback is analysed and the results are discussed in the team meetings of teaching staff, based on which changes are made, if required. All the midwifery teaching staff

consists of practising midwives and the current professional experience ensures an efficient association of theory and practice, and individual needs for professional development are directly related to the development of the profession.

Supporting the development of general competences within the curriculum
Assignments of different subjects/modules facilitate the implementation of a creative approach, e.g. the visualisation of a delivery environment, educational activities for expecting families form part of daily studies (4 ECTS credits), learning assignments in subject *Human health* (development toys, information materials for adolescents), health promotion projects (activities targeted to the population, promoting the health awareness of the population etc.), representing the college in different events and occasions etc. The activities supporting the development of general competences are based on the principle of community service that is highly appreciated by the college. See also chapter 3.12. All specialist subjects and modules are aimed to prepare the graduates who are willing to develop their field.

The development of general competences is supported by the study and assessment methods that facilitate a comprehensive approach to midwifery practice in pass/fail assessments and in final assessment. For example, in subject *Risk-related pregnancy*, theoretical studies are commenced in parallel with case-based tasks to be solved either individually or in pairs. After the theoretical studies of each following syndrome or disorder, a new symptom or a description of a condition covered in theory is added to the case being solved. In addition to the implementation of theoretical knowledge the solving of case-based tasks gives an opportunity to recognise and solve ethical dilemmas, to perceive the competence limits and the responsibility of a midwife, as well as to understand the need for interprofessional collaboration.

Major curriculum changes of the last three years
In 2017 changes were made to the curriculum adopted by the college council in 2014; the changes were about the volume of subjects and their location in the curriculum.

Anatomy and physiology I (4 ECTS credits) is in the first semester of the first year and *Anatomy and physiology II* (2 ECTS credits) in the second semester of the first year – two subjects (in 2017) instead of one anatomy and physiology subject. The change was made based on student feedback and was aimed to a more even distribution of student study load.

In addition, the cohesion between the subjects as well as the assessment have been improved. For example, in module *Maternity care I*, the cohesion between different subjects was analysed and the sequence of subjects based on their content was improved, supporting the achievement of learning outcomes, facilitating a comprehensive understanding and providing a better preparation for coping in practical training. The case-based tasks are created on the basis of real life situations occurring in practice, a comprehensive approach to the midwifery care service provided to a woman/family and the principles of woman and family centeredness.

In module *Maternity care II*, gynaecologists were involved in teaching of medical topics. Teaching of the topics corresponding to the competence and the spheres of responsibility of midwives was revised by midwives (counselling in case of gestational diabetes, counselling in preeclampsia prevention). Simulation based training was integrated into the conduct of pre-clinical training on pathological delivery. Due to the changes in society and an increased encounter with women with different cultural backgrounds, topics like female circumcision and the relevant midwifery care were added to subject *Gynaecological diseases*.

Based on the principles of patient safety and in order to provide a better preparation for practical training in the maternity department, the teaching of medication administration was reorganised on the curriculum.

Strengths:

1. Supporting the professional development and identity of midwife from year one, active engagement in community service and in the activities of the professional association;
2. Close collaboration with the practice bases and the professional association; collaboration with the ethics working group of the professional association, involving the students and extending the focus on topics of midwifery ethics.

Improvement area: more effective collaboration with Tallinn Health Care College in the conduct of midwifery studies and in the development of professional identity. **Planned improvement activity:** to develop collaboration with the midwives association and Tallinn Health Care College in the field of general midwifery subjects, for example, to offer jointly general subjects like *Fundamentals and ethics of midwifery* and *Legislation*.
Improvement area: due to social and cultural aspects, the midwifery students should be prepared for working with women and families coming from different language and religious environments.
Planned improvement activity: in 2020/2021, the development of a subject *Multicultural nursing and midwifery* is planned.

4.3.2. LEARNING, TEACHING AND ASSESSMENT

Supporting student abilities and development, alternative choices on the curriculum
Student ability to cope independently in the process of acquiring the specialist qualification is supported in teaching and study. From the first semester, attention is paid to the development of learning skills, e.g. at the beginning of studies subject *Self-direction* is started, aimed to provide an overview of core concepts in pedagogy, different approaches to teaching and learning, experience of group work, self-analysis, feedback giving and the use of different study methods. The students analyse themselves as learners and identify the learning styles and learning methods that suit them the best. Supporting the development of professional identity is started in the first semester with subject *Fundamentals of midwifery.*

The students have a possibility to independently practice different practical skills in skills labs of the college so that a student could learn at own tempo and at the time suitable to them. The teaching staff members are available to students at agreed on time, giving individual feedback on the performance level and answering the questions. Special needs of students are taken into account on the basis of a particular case (e.g. for health reasons or return from academic leave). It is possible to study on the basis of an individual study plan. A student is given feedback on their learning (e.g. before and after a module exam). In case a student has problems with studies counselling is provided by the studies specialist, if required, the teacher in charge and the head of department are involved.

Studies on topics in a subject are supported by very good instructional materials of the curriculum, that facilitate independent learning. There is a possibility to participate in consultations that are provided by the teaching staff members to facilitate student learning; opportunities for re-assessment have been extended (e.g. according to the study regulations two additional re-assessment opportunities for a charge). The students are helped by the teaching staff in the preparation of oral and poster presentations, in publishing articles and presenting in conferences. For example, the students made presentations at the spring conference of EMWA: *Involvement of*

fathers in antenatal care in 2014; *Attitudes to and experience of normal delivery among the midwives of maternity departments of hospitals in Estonia* in 2017.

Elective subjects

The volume of elective and optional subjects established in the curriculum is 9 ECTS credits. A student can choose according to their interests among the elective subjects offered to all students of the college or to students of the N curriculum. Elective subjects meant for the midwifery students only are also offered in the department, e.g. *Basis of counselling* (2 ECTS credits). Elective subject courses are offered in collaboration with the professional association, e.g. trainings and conferences in the professional field that are offered by EMWA can also be participated by the students; the participation is recognised in the completion of the curriculum based on the RPL system. In the academic years 2017 and 2018 an elective subject course *The digital environment in health and welfare services and its ethics and regulations* was conducted in international collaboration of students and teachers from the Laurea University of Applied Sciences, the Arcada University of Applied Sciences, the Metropolia University of Applied Sciences and the Riga Red Cross Medical College. Students of different fields (e.g. information technology, economy, care work, social welfare and health care) were working and studying together in the same elective course.

Study content, study methods and assessment

Teaching and assessment methods

Purposeful and efficient study methods are used on the curriculum based on learning outcomes. Assessment methods are planned on the basis of learning outcomes and the teaching staff members ensure that the implemented methods really assess the achievement of learning outcomes. For example, an online test is used for the assessment of fact based knowledge in module exams. A case study enables the assessment of professional knowledge and practical skills, but also the level of transferrable competences and the readiness to provide a culture sensitive midwifery care service. Training courses for the teaching staff on the implementation of different teaching methods are organised by the college. Diverse teaching methods are used for the achievement of learning outcomes, e.g. different types of lectures, demonstration, discussion, simulation based training, argumentation, world café method, upside down classroom model etc. All specialist subjects have e-support and the Moodle environment is in active use. Integration of digital technologies into the study process, the supporting of a modern approach to learning at the college in general is described in chapter 3.8.

The syllabi include a clear description of assessment criteria and the minimum level for the achievement of learning outcomes. A student can assess oneself and they are also provided feedback after pass/fail assessments and exams (incl. on learning, assessment in general, assessment of own contribution, the organisation of studies); after the defence of final thesis a student can give feedback on the curriculum as a whole. Assessment of final theses is based on the guidelines for final theses and their defence established in the department, including the specification of assessment criteria.

Non-differentiated formative assessment is mostly used during the studies; differentiated assessment is used for summative assessment of module exams. In all specialist module exams (at the end of years 1, 2 and 4) in addition to the achievement of learning outcomes of the module also general competences are assessed. To ensure the effectiveness of assessment it is carried out in two steps, the first step includes a test meant for the assessment of fact based knowledge, a positive result of which gives an access to the second step of the exam. The second step involves solving a comprehensive midwifery case, including the demonstration of theoretical knowledge and practical skills and their integration in order to provide a woman-/family-centred care. All module exams are assessed by an assessment committee, involving the whole teaching team of that module. After a

specialist module exam a student is given feedback by the assessment committee on the level of student performance so that a student can have a clear understanding of their further development needs. In addition, a student can give feedback on their own coping in the exam and on the level of their preparation. The whole learning and assessment process is supporting the growth of a student in order to become a midwifery specialist.

Supervision of and feedback on independent work
The teaching staff members supervise and provide feedback on independent learning tasks of students individually as well as for a group. Supervision is based on general guidelines established by the college, guidelines for independent learning tasks and the individual and professional development needs of students. For example, a student returning from an academic leave needs support to achieve the basic level of professional knowledge in order to continue their studies. For this purpose individual meetings with teachers are organised or an opportunity to participate in the studies of a younger student group and participate in self-assessment on the basis of self-assessment tests. The Moodle environment is actively used, depending on the content of the subject. All syllabi include a description of the content and assessment criteria of independent learning tasks that are reviewed and revised by the teaching team according to the needs. Feedback is given based on the subject and the task. The teaching staff members collaborate actively in teaching of midwifery topics, in the use of source materials and development of study materials.

Example:

- Seminars of final theses start in the third study year with preparation of a project for final thesis. In the fourth year the project is finalised and defended. In the fifth year monthly seminars of final theses are organised, focussing on the content of the thesis. 4 or 5 members of MW teaching staff take part in the seminars and give feedback on the final theses under preparation. The above system, including a mandatory pre-defence of and feedback on final theses, has been in operation for 4 years. In addition, the students are given oral and written individual feedback by their supervisor(s), a continuous support is ensured in each step of final thesis. Due to the conduct of seminars, student satisfaction with the study process has increased and so has the quality of final theses. The assessment committees of final these are led by experts in the field from outside the college.

Learning environment
In the academic year 2016/2017 the priority was to update and improve the learning environment and equipment of the MW curriculum. New mannequins were bought by the college, e.g. a birthing simulator SimMom™ and a premature simulator Anne™. The maternity skills lab was equipped with innovative devices and aids, imitating an actual delivery room. Simulation based training is actively used on the curriculum, including the implementation of excellent equipment; the teaching staff members have acquired necessary methods and techniques. In order to ensure a continuous development of simulation based training methods, a relevant working group has been established at the college, involving also a representative of the MW curriculum. Skills labs, including the equipment and devices, for teaching midwifery subjects are modern and actively used by the qualified midwifery teaching staff. These rooms and the equipment (excluding the delivery skills lab) are also used by other curricula of the college and in the conduct of training courses of the open college, e.g. for the ambulance service staff members in Tartu and in Valga hospitals. In annual budget planning of the department a need for new equipment and devices is taken into account. Since the academic year 2018/2019 the recording equipment of the skills labs has been actively used in the conduct of simulation based training.

Practical training

Practical training forms 39% of the total volume of the curriculum (106 ECTS credits). Practical training is integrated with the cycles of theoretical studies; its time and duration are regulated by the curriculum, the schedules for studies and for practical training. Practical training is carried out in health care institutions providing the midwifery and obstetric service in Estonia. Practical training is supervised by specialists in the field assigned by a practice institution and the teaching staff members of the college. The aim of practical training is to develop the skills of implementing the acquired theoretical knowledge in practice, as well as to acquire and develop practical skills, attitudes and preparedness for collaboration according to one's professional competence. Within practical training a student documents their practical experience, filling in the recording cards according to the EU directive 80/155/EEC, as well as to the learning outcomes of the particular practical training session. The recording cards and the assessment given by the supervisor of practical training are submitted by a student for final assessment. At the end of each practical training session feedback is given by a student on the learning environment and supervision of practical training (a gradual course of practical training, content, getting answers to one's questions). Different skills, development needs and strengths of a student as well as the supervision capability of a practice institution become evident in the process of practical training. For example, within practical training *Maternity care I* a midwifery student should have an opportunity to participate in normal delivery. In case the number of delivery cases is insufficient during the practical training session of a student, the essential learning outcomes cannot be achieved. Analysis of those situations is described in the diary of practical training, forming a basis for planning the learning outcomes for the next practical training session, and to be taken into account by the college while choosing the institutions for practical training. The conduct of practical training is student-centred, enabling to perceive a student's responsibility and contribution in the provision of a quality midwifery care service. Demonstration and discussion are most commonly used assessment methods in clinical settings, while written assessment methods (practice diary, self-analysis) are preferred in the assessment by the supervising teacher at the college. Assessment in practical training is continuously monitored by the college to ensure the implementation of purposeful and feasible assessment methods. The assessment is conducted in two steps, the first step involves a 3-party assessment of student performance of clinical practice, and the second step includes the assessment of and feedback on independent learning assignments and final assessment. The second step of assessment takes place at the college.

Specialist practical training can be organised in a limited number of practice institutions and it is a real challenge for the curriculum to provide all students with places of practical training at the same time. The practice bases are interested in the organisation of practical training also in the summer time that may be an option to meet student wishes, if a student would prefer to take their practical training in a particular health care institution. Due to a limited number of places for practical training a unique opportunity was created by the teaching staff of the curriculum for the nursing students to pass their practical training *Maternity care* in the college skills labs. For the achievement of learning outcomes of practical training, the simulation based training is conducted under supervision, including one antenatal visit and one postnatal home visit engaging a real patient/client. The visits contain all the essential components of real life visits to facilitate the understanding of the competences and responsibility required and to recognise a need for collaboration between the obstetric and primary care settings in the provision of comprehensive care to pregnant women and to women/families after delivery.

Practical training is organised in close collaboration with the practice bases. For example, in 2016 a meeting took place in the women's clinic of TUH, involving a discussion on a need to extend the practical training sessions of final year students due to insufficiency of their documented practical experience in the field of midwifery. As a result of the discussion a regular collection of information

about the practical experience (based on the recording cards) was started at the end of the spring semester of the fourth study year. This in turn provides an input for planning the final practical training session on the basis of individual needs for gaining practical experience. Training for supervisors of practical training is based on an agreement between the college and a practice institution, e.g. basic training without a charge for supervisors of practical training is provided by the college based on a quality agreement, involving an analysis of current practical training and supervision experience. Two teaching staff members of the MW curriculum conduct the training of supervisors of practical training.

Implementation of the RPL principles is regulated by the RPL procedure established by the college (see chapter 3.9.). In about 60% of the cases, the RPL system is used for recognition of prior learning as part of the curriculum, about 30% of the applications are related to recognition of work experience (Figures 26 and 27).

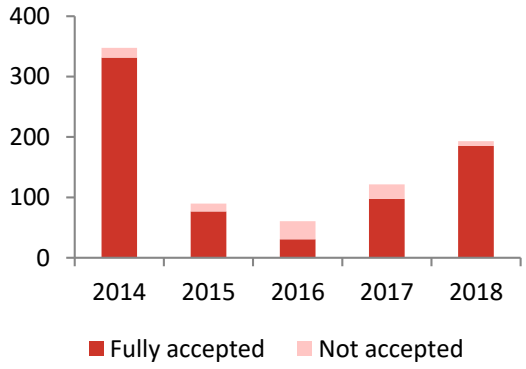


Figure 26. RPL statistics (in ECTS) in 2014–2018

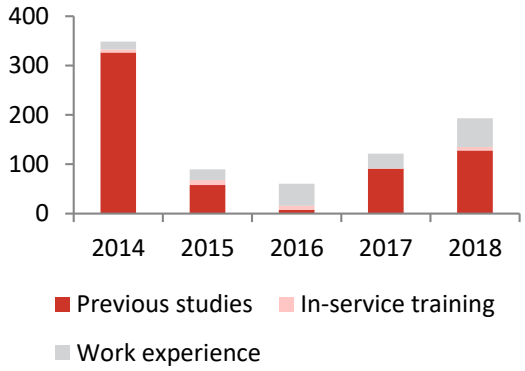


Figure 27. Implementation of RPL (in ECTS) in completion of curriculum in 2014–2018

Alumni

About 50% of the admitted students complete their studies within the standard period of study. Due to a long period of studies and a 100% female student body on the curriculum the proportion of students on academic leave is considerably big predominantly for personal reasons (parental leave). The students returning from an academic leave are supported, providing them an opportunity to complete their studies in a flexible way on the basis of an individual study plan.

A considerable number of students are employed in their final study year and commence their professional career after graduation from the college. The graduates of the curriculum give feedback on the curriculum and participate in the development of the curriculum through the professional association (EMWA). We have noticed a trend that students who have actively participated during their studies in the activities of international projects, the student council and the EMWA council are more willing to keep contact with the college. For example, they follow the developments and events of the college on social media, supervise the practical training of students and are more willing to give feedback for the implementation of improvement activities. The alumni are regularly met at the celebrations of the college anniversary. One of the priorities of the curriculum in coming years is a more active engagement of the alumni in the activities of the college.

The graduates of the curriculum are highly evaluated and competitive specialists in the field. For example, the graduates of the curriculum are employed in the health care institutions providing obstetric care in Tallinn and one graduate has successfully started her master's studies in midwifery in London. In the process of studies an emphasis is paid on the student involvement in research and

development activities and in community service, facilitating the development of student initiative creativity, openness and willingness to contribute. The students' participation in competitions and other events of the professional field is supported. For example, the second prize was awarded to a final thesis of the MW curriculum in a national competition of student research studies in 2017. In the autumn of 2018 the MW students participated successfully in a competition *Ettevõtlik noor* (Youth enterprise) organised by Tartu city.

Examples of curriculum development based on alumni feedback:

- *„It would be good to include the specific issues of breastfeeding counselling in the basic midwifery studies "*. As a result of the feedback the topics of different pathologies were added to subject *Study of breastfeeding*, in the fourth study year;
- *„In the third study year something could also be related to the field of midwifery"* – the involvement of third year midwifery students in the conduct of the cycle of lectures for expecting families was commenced. In addition, the midwifery teachers were involved in the conduct of a subject on research methods in order to better integrate research with midwifery.

Strengths:

1. Effective collaboration with the practice bases in supporting the supervision and the achievement of learning outcomes;
2. Excellent learning environment with modern equipment, learning materials and support by the teaching staff, enabling the students' independent learning and training based on their individual needs;
3. All students on the curriculum are engaged from first study year in health promotion activities targeted to community service.

Improvement area: modest graduate involvement in and contribution to the development of the curriculum. **Planned improvement activity:** in 2019, the organisation of annual graduate afternoons is commenced aimed at discussions on graduate study and employment experience, as well as the identification of solutions for curriculum development challenges. **Improvement area:** extension of opportunities for specialist practical training in order to ensure the required practical experience and the achievement of learning outcomes for all students. **Planned improvement activity:** extension of opportunities for professional practical training in primary care settings (e.g. health centres providing primary midwifery care).

4.2.3. TEACHING STAFF

As of 31.12.2018 there are 42 teaching staff members in the department, including seven members in the field of MW (Table 16). In addition, the teaching on the curriculum is also conducted by seven teaching staff members of general subjects and 12 members of the N curriculum. The teaching staff of the MW curriculum involves highly qualified practising midwifes, including four members whose professional qualification in midwifery is at level 7, one member at level 6. One member has a certificate of competency in crisis pregnancy counselling.

Table 16. General data of teaching staff of MW curriculum as of 31.12.2018.

	Posts (persons)	*PhD*	Master's degree	First level of higher education
Docent	-	-	-	-
Lecturer	1 (1)	-	1	-
Assistant	0.75 (2)	-	1	1
Teacher	2.25 (4)	-	-	4

As of the spring 2019, one full-time lecturer is employed by the curriculum, the rest of specialist teaching staff members have part-time employment. It is definitely a strength of the curriculum that the teaching staff members practise in the specialist field in parallel with their teaching duties, but at the same time it makes the organisation of studies more complicated, e.g. to find dates/time for the module exams and team meetings that suit all staff members. The organisation of studies and management of the teaching staff requires systematic planning of activities in advance. In the academic years 2017/2018 and 2018/2019 one visiting staff member was involved in the conduct of studies on the MW curriculum. The theoretical studies of module *Maternity care II* are conducted by gynaecologists who teach pathologies related to pregnancy, delivery and puerperium according to the learning outcomes of the curriculum.

Teaching staff of the curriculum is led by the lecturer of the curriculum, close collaboration with the teaching staff and the teachers in charge of modules on the N curriculum is essential. Each year the teaching staff members have development interviews with the head of department, including a discussion about the training needs of teachers and planning and prioritising activities for the next year. The teaching staff members of the curriculum are teaching subjects of their professional field on other curricula. For example, on the PT curriculum the topics on human development and embryology, physiotherapy in obstetrics and in case of gynaecological diseases; the subjects on embryology, female health and male health are conducted on all curricula.

In order to ensure the coherence of the curriculum and the professionalism of the teaching staff, rotation is implemented on the curriculum, i.e. the teaching staff members "exchange" among themselves the subjects and topics they are teachings. For example, in case one teacher has been teaching a subject on pregnancy and/or sexual education for a certain period of time, she will start teaching on delivery or the antenatal period the next academic year. The rotation facilitates the development of curriculum and subject content, as well as the professional development of the teaching staff.

The teaching staff members serve as role models of midwife, contributing actively to teaching, RDC activities and professional development at national and international levels. The teaching staff members belong to national expert committees, e.g. to the advisory body *The Estonian Committee on Breastfeeding Promotion* of the Ministry of Social Affairs, baby friendly hospital initiative, a working group on the professional standards of crisis pregnancy counsellors, a working group for creation of information material *Exercise in pregnancy* under the initiative of active life cluster SportEST. The updated information has been included in teaching.

For purposeful community service and to enhance the popularisation of the midwifery profession articles by the teaching staff of the curriculum are published in the college web-magazine *Tervist!* focussing on the profession and promoting health awareness, for example, *Participation in the lectures of family education programme: acquired helplessness or an informed choice?* (2015); *Messages from midwives: breast cancer* (2016); *Messages from midwives: cervical cancer* (2016); *Avoiding pregnancy in a digitalised society* (2018).

In order to improve the quality of teaching and study the teaching staff participates in specialist networks, collaborates with other structural units of the college as well as with national and international partner organisations. Considering a limited size of the teaching staff, the volume of current research and development activity on the curriculum is optimal, but the 0.5 lecturer position on the curriculum must be filled to ensure continuous development of the curriculum and support the relevant research and development activity.

Strengths:

1. All teachers on the curriculum are midwives practising in the field, ensuring high-level specialist competences on the curriculum as well as in the conduct of training courses at the open college;
2. Rotation of the teaching staff members in teaching specialist subjects to support the cohesion of subjects.

Improvement area: the number of lecturer positions should be increased in order to ensure the sustainability of the curriculum development, research and development activities. **Planned improvement activity:** active search for a midwifery teacher in Estonia or abroad to fill the lecturer position (0.5 workload) created on the curriculum in the spring of 2019. **Improvement area:** more international lecturers to be involved in the conduct of studies in order to maintain the graduates' competitiveness in the internal and external labour markets. **Planned improvement activity:** involvement and implementation of international lecturers in the conduct of studies with an aim to share the best teaching and midwifery practices; in the spring semester of 2019 collaboration was started with an international lecturer in the preparation of a subject course.

4.4. VOCATIONAL EDUCATION CURRICULA

At THCC initial vocational training is provided in four study programme groups: social work and counselling, child care and youth services, medical diagnostic and treatment technology, therapy and rehabilitation. Data of the curricula are given in Table7 in Chapter 3.7. THCC has the right to award the profession on all vocational training curricula. The curricula are reviewed and revised on the basis of revisions of professional standards and based on the feedback by the interest groups; the curricula have passed expert evaluation and have been approved in the EHIS: CW in 04.02.19; CWMHP in 28.01.2019; CM in 28.01.2019; EMT in 26.04.2019 and MAS in 28.01.2019.

Development of vocational training is conducted on the basis of the general principles of the study and development activity of the college, there are no differences in the management and development of the study process regarding the study levels, the study programme groups or forms of study. In order to avoid duplications the self-evaluation of vocational training curricula is in an aggregate form, the specificities regarding the study programme groups are referred to in the text. The standards covered in chapters 3.1. and 3.12. of the self-evaluation report for institutional accreditation apply to all educational levels and all curricula of the college.

Differences in the organisation of studies are related to two study programme groups (social work and counselling, child care and youth services) where school-based as well as workplace-based form of study are organised on the curriculum of CWMHP and on the curriculum of CM (Table 17). Workplace-based study is based on the employer's need and it requires a working environment that suits to the conduct of studies. Taking into account a need for the achievement of learning outcomes, the focus of training content is adjusted according to the needs of the employer (e.g. the amount of subject content covered within the studies).

Workplace-based form of study has been in use since 2016, it is constantly being analysed and developed. For this purpose we participated in the sprint of 2019 in a pilot project *Recognition of the quality of workplace-based training in vocational and higher education* that was aimed to harmonise the quality of implementation and development of workplace-based study in schools, providing them with a framework for the evaluation of quality of workplace-based study and for improvement of quality in future. The recognition process required self-evaluation of schools followed by external evaluation based on what schools are given a final report including feedback. Participation in the pilot project was a voluntary choice of schools. By the moment of submission of this self-evaluation report we have received the feedback report of the pilot project that forms a basis for planning improvement activities after the year 2019.

Table 17. Differences in organisation of school-based and workplace-based forms of study

Study programme group	Curriculum	Full-time school-based study in cycles	Full-time workplace-based study
Social work and counselling	CWMHP 60 ECVET	Organisation of studies: Practical training forms at least ½ of the study volume (practical training and practicums). Practicums take place in study cycles under the supervision of a teacher. Practical training facilitates the reinforcement of knowledge and skills in a working environment. A place for practical training enabling	Organisation of studies: Studies at the workplace form **2/3** of the study volume (mainly practicums and practical training, theoretical studies according to the competence of the enterprise) and take place under supervision at the workplace. As the study groups are formed of employees from different enterprises of Southern Estonia the contact-based studies outside the workplace take place in the rooms of Tartu

	the achievement of learning outcomes is ensured by the college, considering the needs and possibilities of a pupil. Practical training takes place according to an agreed schedule. A pupil is not paid for practical training.	Health Care College. The achievement of practical learning outcomes is ensured in collaboration with supervisors at the workplace; a pupil is performing their study tasks at their workplace according to the work schedule. The suitability of an enterprise for the conduct of workplace-based study is evaluated in the course of concluding a quality agreement, a contract for practical training and/or a 3-party learning agreement.
	Organisation of studies: studies at the college take place in week-long cycles.	Organisation of studies: studies at the college take place in cycles. The length and frequency of the cycles is agreed with the employers.
	Study content: the content of modules and subjects is determined by the curriculum that is based on the professional standard. Division of studies into theoretical studies and practical training is based on learning outcomes and take place in the college rooms, study visits and practice institutions.	Study content: the content of modules and subjects is determined by the curriculum that is based on the professional standard. Division of studies into theoretical studies and practical training is based on learning outcomes and take place in the college rooms, at the workplace of the learner according to the possibilities of the workplace. In case the achievement of certain learning outcomes is not possible at the workplace the performance of practical training is ensured by the college in another enterprise and within study visits where a learner can achieve the learning outcomes.
	A learner in school-based study generally has no professional experience and therefore needs supervision in all aspects of the field.	**A learner** has professional experience in the field and it is necessary to identify their individual development needs regarding the work content, at the same time the achievement of all learning outcomes of the curriculum should be ensured.

4.4.1. PLANNING AND MANAGEMENT OF STUDIES

Curriculum management and development

Vocational training curricula are led by the head of vocational education department Tiina Uusma. There are 6.25 positions in the department, 5.0 positions are filled by eight persons as of 31.12.2018. In the academic year 2016/17 two new vocational training curricula were opened at the college – the client worker for people with mental health problems, level 4, and masseur/masseuse, level 5. To improve the development and coordination of studies the work in the department was reorganised and a position of lead teacher was established for each curriculum. The reorganisation has resulted in a more effective cohesion between the curricula and the subjects, because the lead

teachers are responsible for the implementation of development activities at the levels of topics, subjects, modules and curricula.

Curriculum development at the college in general is described in chapter 3.7. Planning to open a vocational training curriculum is related to the needs of the labour market and is mainly started by the representatives of employers who inform the college about a need for training. Before opening a new curriculum an analysis of potential employment of graduates and the existing resources of the college is conducted that serves as a basis for planning the size of a study group, the membership of teaching staff (incl. a need for additional teaching staff members) and the time for opening studies. Curricula are designed on the basis of valid professional standards and the vocational education standard or in cooperation with an employer based on their needs. All vocational training curricula at the college are based on professional standards.

Curriculum development involves the learners, graduates, teachers and collaboration partners (Tables 18 and 19). The graduates as supervisors of practical training give feedback that is important for curriculum development; they also participate in the work of the curriculum board, making proposals for curriculum changes. Teaching staff members (under the leadership of the lead teacher) collaborate in the development of module content, the cohesion between the modules and the integrity of the curriculum within planning activities of an academic year and coordinating assessment issues. Material and technical resources of the college as well as the investments support duly the implementation and development of the curricula (see chapter 3.2.).

Representatives of the college are involved in the development of professional standards and in opinion surveys (CW, level 4 – 2014; CWMHP, level 4 – 2015; EMT, level 4 – 2018; MAS, revision of level 5 – 2018) that gives an opportunity to take into account the needs of employers in the development of curricula at the college, incl. the determination of learning outcomes and the organisation of assessment of their achievement. All curricula at the college comply with the requirements of the professional standard and the college has the right to award the profession of CM, CW, CWMHP, EMT and MAS.

Table 18. Examples of curriculum development based on feedback

Study programme group	Developments based on learner feedback
Social work and counselling	• In the studies of **CWMHP** the integration of theory and practical training was improved (alternation of school-based weeks and workplace-based weeks, interim seminars of practical training). • More focus on the assessment and activation of a client, not so much on care activities – the guidelines and tasks of workplace-based practical training were specified in collaboration with the workplace-based supervisors. • An elective subject *Coping with a violent client* (2 ECVET) was added to the curriculum. • Purposeful conduct of study visits to practice bases and other institutions. • An elective subject *Care after stroke* was added to the curriculum of **CW.**
Child care and youth services	• Based on learner proposals elective subjects *Organisation of leisure time activities for children* and *Care after stroke* were added to the curriculum.
Medical diagnostic and treatment technology	In 2017 feedback was given by learners that better venepuncture skills are required for the conduct of practical training. In 2018 cannulation was related to a venepuncture procedure during practicums about drug administration and assisting a nurse; the volume of practicums on drug administration was increased by 2 hours.
Therapy and rehabilitation	Topics of classical massage were started in semester 1 (formerly in semester 2) in order to better integrate theory with practice.

Table 19. Examples of changes due to collaboration and partner feedback

Study programme group	Changes due to collaboration and partner feedback
Social work and counselling	• Conduct of CW training outside Tartu (Põlva 2015, Jõgeva 2016, Võru 2017, Viljandi 2017); • In 2016 workplace-based study was opened for client workers for people with mental health problems in collaboration with Maarja Küla SA, Tartu Maarja Tugikeskus, MTÜ Iseseisev elu, SA Tartu Vaimse Tervise Hooldekeskus, MTÜ Lõuna-Eesti erihooldusteenuste keskus; • In 2018 school-based study was added for client workers for people with mental health problems based on the need for workforce identified in the OSKA (a system of labour market monitoring and future skills forecasting) report; • Practitioners with teaching experience are engaged in teaching; • Training of first aid skills is performed before the first practical training period. • Purposes are determined for study visits and observation practices, facilitating the achievement of different learning outcomes (special needs + crisis psychology + developmental psychology + violent client for CWMHP and CW) Exchange of teaching staff with schools of foreign countries (Rotterdam Albeda, Tampere TREDU, Helsinki OMNIA) within a project.
Child care and youth services	• From 2016 workplace-based study for CM is conducted in collaboration with the pre-school education department of Tartu city government. Different pre-school education specialists (e.g. speech therapist, teacher of the children with hearing disability, teacher of visually impaired children, music teacher etc.) are involved in the conduct of studies; • Since the academic year 2018/2019 first aid training is performed before the first practical training period. • Exchange of teaching staff with vocational schools in foreign countries (Tampere TREDU) based on a project; • Collaboration started with new international partners: Johanniter Akademie Bildungsinstitut Mitteldeutschland, Germany; Escola Técnica e Profissional do Ribatejo SA Portugal.
Medical diagnostic and treatment technology	• Practitioners from TUH, the Tartu Ambulance Foundation and the Rescue Board are involved in the conduct of study for emergency medical technicians on topic *Patients with special needs at different ages*; the topic was integrated into the assessment task in the academic year 2018/2019; • Exchange of teaching staff with vocational schools in foreign countries (Rotterdam Albeda) based on a project; • Pupils of EMT curriculum have an opportunity to perform practical training of ambulance service abroad in collaboration with Johanniter Akademie Bildungsinstitut Mitteldeutschland in Leipzig, Germany.
Therapy and rehabilitation	• First aid training is performed before the first practical training period. • Exchange of teaching staff with vocational schools in foreign countries (Well-Tech) based on a project.

Vocational training curricula are relevant and in accord with the development of society:

- The objective of the college is to offer training in compliance with the actual workforce requirements in the fields of social welfare and health care. Results of research carried out in these fields are published in the OSKA report, demonstrating a growing need for CW**, CWMHP** and **EMT** with vocational education. The goal of the active aging strategy is to engage older people (50 and above) in society and keep them socially active – a lot of CW and CM pupils (35%, CM 31%) are at the age of 50 to 59 based on the OSKA report. A need for supervision and care is increasing due to the aging population and special needs, resulting in a continuous need for educated care workers, client workers for people with mental health problems and

childminders. A need for CWMHP and the compliance of their competences with the needs of the labour market are evidenced by an increase of admitted pupils (2017 – 16 pupils, 2018 – 26 pupils), the award of profession at level 4 to all graduates of the curriculum and the employers intension to have their employees trained at THCC;

- The curriculum of CM is continuously relevant and in accord with the changes in society. A need for educated childminders is based on the qualification requirements established for the persons providing childcare and planned changes in pre-school childcare institutions due to the enforcement of qualification requirements for teaching assistants in 2020. Graduates of the CM curriculum can work as assistants to kindergarten teachers. Due to the implementation of workplace-based study the admission to this curriculum has doubled since 2016;
- The curriculum of MAS is relevant as new health centres, rehabilitation centres and spas are opened in different parts of Estonia where masseurs with a professional certificate are the preferred workforce. The number of office employees is increasing and their health condition is often improved by massage procedures prescribed by an occupational health doctor. The compliance of training with the requirements of the employers is evidenced by a fact that 90% of the graduates in 2016 are employed in the field and a half of current pupils are offered a job in a practice enterprise during their practical training.

Increasing emphasis is paid on the preparation of social welfare and health care workers' ability to cope with persons with special needs at different ages. All curricula contain the appropriate topics Table 20).

Table 20. Topic of special needs covered by the curricula

Study programme group	Curriculum	Topics	Volume ECVET
Social work and counselling	CW	Persons with special needs, types of special needs	4
		A child with special educational need – elective	2
		Care in case of mental and behaviour disorders	1
		Pervasive developmental disorders – elective	2
	CWMHP	Special needs (incl. mental disorders)	4
		Pervasive developmental disorders – elective	2
Child care and youth services	CM	Care and development of a child with a special need	5
		Care of a child with severe disability	4
Medical diagnostic and treatment technology	EMT	Patients with special needs at different ages	2

The compliance of the curricula with the needs of society is ensured by systematic development of professional standards and standard-based curricula in collaboration with the key partners. The compliance of the curricula with the needs of society is evidenced by a big proportion of graduates who are issued the professional certificate.

International collaboration

The team of vocational education department participates actively in the conduct of international projects aimed at curriculum development.

Examples:

- SAFHY – comparison of curricula in Estonia and Finland; creation of learning materials on joint topics and the materials are used in teaching; language studies support the internationalisation

in vocational education and the competitiveness of graduates in the open labour market of Europe;
- WellTech – topics of the CW curriculum. The project is aimed to develop solutions that facilitate independent coping by the elderly in their home environment and to integrate these solutions into the curriculum. To achieve the aim of the project Finnish, Dutch and Estonian curricula, teaching methods and subjects are compared in order to determine the subjects where the learners could instruct the elderly on the use of the developed solutions. In collaboration a subject named *WellTech* is developed to be first introduced as an elective subject for the vocational training curricula in the field of health care.

The volume of current learning mobility and development projects used for curriculum development is considerably big. The pupils of vocational education can have practical training abroad within a project. First projects were meant for the pupils of the CW curriculum, in 2017 the curriculum of CM was involved and in the autumn of 2018 also the curriculum of EMT. Participation in learning mobility and development projects has its limitations due to a short standard period of study for one or two years and also to the fact that the majority of pupils are adults with families and permanent employment. Participation in projects in the current volume supports curriculum development and the improvement of study quality. Learning mobility on the CW curriculum has taken place since 2014 and on the CM curriculum since 2016. In 2018 a learning mobility project was carried out for pupils of the EMT curriculum. The college has planned to apply for the Erasmus+ charter for all pupils and teaching staff of vocational training curricula to develop mobility, compare the curricula and improve the competences necessary for international collaboration.

International collaboration has been a good opportunity to compare the college curricula with similar curricula in other countries and plan joint development activities.

Examples:
- SAFETY – the CW curricula in Estonia and Finland were compared in order to identify the similarities and differences and develop jointly learning materials. As a result of the project a platform was designed, including the learning materials created jointly by the partners. Currently the learning materials are used on the curricula of vocational education (CW, EMT) as well as in professional higher education (N and MW);
- To compare the EMT curriculum four teaching staff members visited a partner school in Leipzig, including also an introduction to teaching/learning methods and an evaluation of opportunities for practical training. The result is that in 2019-2020 four pupils of the EMT curriculum can perform their practical training in Leipzig;
- The comparison of the CM curriculum has been discussed in preparation for practical training abroad in the course of learning mobility projects, in order to identify the possibilities for the achievement of learning outcomes in collaboration with a partner school (Tampere TREDU, Escola Técnica e Profissional do Ribatejo SA Portugal). As a result agreements have been made for the performance of CM practical training *Care of a child with special needs* in Tampere and Santarémi.

Supporting the achievement of learning outcomes
The accordance of objectives, learning outcomes, study content and methods, assessment criteria and assessment methods of vocational training curricula is ensured by:
- Purposeful and systematic development and revision of the implementation plans in teamwork;
- Counsellors from INNOVE can be engaged in the development of implementation plans; the counsellors support the curriculum developers to ensure the cohesion of objectives, methods and assessment;

- The curricula and implementation plans are evaluated by the EHIS experts before their approval and the experts recommend improvement activities, if required;
- Revision of the implementation plans is generally done in collaboration with the representatives of schools teaching in the field, making it possible to take into account the feedback received in different schools and share best practices;
- Development and revision activities are based on the proposals made by the pupils and employers, the curriculum board and experts in the field for the integration of objectives, content and methods of studies.

Curriculum cohesion
Development of the curriculum cohesion is based on the requirements of the professional standard, a logical sequence of topics and feedback given by the parties engaged in the study process. Topics of the curriculum are related to prerequisite subjects and the subjects that require the completion of prerequisite subjects are entered into the timetable only after the completion of the prerequisite subjects.

Examples on curriculum cohesion:
- A topic of the nervous system in anatomy is followed by neurological diseases in the study of diseases – based on the feedback by EMT pupils and teachers, the connections between the two topics were made clearer for learners in 2018;
- A topic of learning and teaching precedes a topic of supervision of persons with special needs;
- Practical training in ergonomics precedes and runs parallel with practicums on care giving activities where ergonomic techniques are already implemented.

Cohesion within a module is ensured in the process of module development and is based on continuous self-reflection on professional experience by a teacher to plan the sequence of topics by moving in teaching from simple to more complicated and from familiar to unfamiliar material. Based on the feedback given by the teachers and pupils a continuous improvement of cohesion inside and between the modules is conducted under the leadership of the lead teacher, engaging teachers practising in the field.

Experience of and proposals about the integration of theory and practice are always considered and, if possible, the feedback given by the supervisors of practical training and pupils is taken into account in the development of theoretical subjects.

Examples:
- Practical training periods are organised in cycles, learning outcomes of practical training are formulated on the basis of objectives of the study and the topics covered by pupils in theoretical studies;
- To facilitate the integration of theory and practice, within practical training periods some studies are planned at the college in order to organise interim seminars based on the needs of pupils and invite the supervisors of practical training to meet and discuss with supervising teachers at the college.

The compliance of the topics and learning outcomes of modules/curricula with the learning outcomes established by the vocational education standard is given in Appendix 4 of the report.

Elective subjects
Elective subjects on the curriculum are planned on the basis of the following principles:
- Transferrable competences determined by the professional standards – use of digital technologies on all curricula;

- Elective components described in the professional standard, e.g. driving an emergency vehicle on the EMT curriculum; supervision and mentorship on the CWMHP curriculum etc.;
- Opportunities for practical training abroad – language classes for pupils taking practical training abroad;
- Wishes of the employers, e.g. CWMHP – *Pervasive developmental disorders;* CW – *Care of a client with dementia*;
- Wishes of pupils/employers, e.g. CWMHP – *Coping with a violent client;* CW – *Care after stroke*; CM – *Organisation of leisure time activities for children*;
- Possibilities of the college and wishes of pupils, e.g. *Basis of classical massage, Basis of aroma therapy, Health and mindfulness.*

The pupils of vocational education have an opportunity to take part in elective subject courses that are conducted by foreign lecturers visiting the college. Unfortunately the participation by the vocational education pupils is quite limited due to their insufficient foreign language skills or a strictly fixed working schedule.

Supporting general competences within the curriculum

The curricula have been developed on the basis of professional standards, including subjects that support creativity and entrepreneurship in the volume established by the professional standard. All curricula include a mandatory module *Career planning and basis of enterprise,* providing a learner with the knowledge of enterprising and economy as well as an ability of planning own career in a contemporary economic, enterprise and working environment.

Examples of supporting creativity and entrepreneurship within the curricula:

- The CM curriculum includes subject *Creativity and creative activities*. For example, methodology of subjects *Supporting child development, Developing the growing environment for the child* and *Professional ethics* includes a lot of creative tasks combined with practical outcomes, supporting pupils' entrepreneurship (e.g. performance of risk analysis, preparation and conduct of events for children within community service);
- The CW curriculum includes activating activities for creative and inspiring supervision of persons with special needs at different ages;
- Community service is integrated with the studies on a curriculum: workshops where community members are taught by the pupils of the college chapter 3.12.);
- All curricula support the development of specialist competences on the basis of creative solutions: scenario based tasks, problem based learning, experiential learning etc.

Major curriculum changes of last three years (Table 21)

Within last three years two new vocational training curricula have been designed by the college – in 2015 the curriculum of MAS, level 5 and in 2016 the curriculum of CWMHP, level 4. Both curricula were designed on the initiative of and in collaboration with the employers. The preparation of the professional standard of CWMHP and opening the relevant studies was initiated by *AS Hoolekandeteenused* in 2015. Opening the studies of MAS was supported by rehabilitation doctors in Estonia in 2015.

Table 21. Examples of curriculum changes of last three years according to study programme groups

Study programme group	Curriculum	Changes
Social work and counselling	CW	In 2016 the volume of modules and topics on activating and supervising a client was increased due to revision of the professional standard (e.g. Activating activities from 1.5 ECVET to 4 ECVET). Community service integrated with the studies: teaching

		informal carers, activating activities in social welfare institutions and open care practice in families. From 2018 the studies are completed with the professional examination.
	CWMHP	Designing a curriculum in collaboration with the employers and opening workplace-based study in 2016. From 2017 the studies are completed with the professional examination.
Child care and youth services	CM	In 2017 the topics on the care and development of a child with special needs, that had been elective, were made mandatory on the curriculum. Community service integrated into the studies: Health days in child care institutions and schools and practical training in a home environment of the child. From 2017 the studies are completed with the professional examination.
Medical diagnostic and treatment technology	EMT	In 2016 an elective subject *War and disaster medicine* was added in collaboration with the Estonian National Defence College and an elective subject on civil operations in massive disasters (within the ModEx project) in collaboration with the Rescue Board. In 2018 interprofessional training on solution of events requiring a lot of resources in collaboration with the Estonian National Defence College. Community service integrated into the studies: providing first aid in public events (Maamess 2017). From 2018 the studies are completed with the professional examination.
Therapy and rehabilitation	MAS	In 2018 subjects *(Oriental) massage philosophy* and *Tibetan massage* that had been elective became mandatory due to the requirements of the professional standard. Community service integrated into the studies: providing a massage service to the college employees and community members.

Electronic practical training documentation on Moodle is used on all curricula, making exchange of information and giving feedback on the activities of practical training more flexible and efficient. The supervising teacher at the college as well as the supervisor of practical training can access the documentation at the same time, facilitating efficient time management.

In 2018 the review and revision of the curriculum of emergency medical technician was started in collaboration with the teachers of the same field at TallinnHCC due to adoption of a new version of the professional standard in November 2018.

Strengths:

1. The college has been granted the right to award the profession on the curricula of CM, CW, EMT, CWMHP and MAS, due to what the pupils complete their studies with the professional examination;
2. The pupils' evaluation of the specialist knowledge and skills acquired at the college are is high;
3. Active international collaboration on the vocational training curricula is supporting the pupils' general competences and competitiveness, as well as the relevance of the curricula.

Improvement area: Russian speaking pupils' coping with studies needs to be supported. Planned i**mprovement activity:** extension of language learning opportunities for vocational training pupils to support their mobility and participation in the studies conducted by international lecturers (application for the learning mobility charter in 2019, additional language learning projects and international collaboration). **Improvement area:** more effective support provided to the employers, to facilitate their contribution in supporting the achievement of learning outcomes by pupils. **Planned improvement activity:** the college is planning activities to support more effectively the employers and engage them in the conduct of workplace-based studies (seminars, collaboration meetings, counselling).

4.4.2. LEARNING, TEACHING AND ASSESSMENT

Supporting pupil abilities and development, alternative choices on the curriculum
Admissions are planned on the basis of the development plan of the college, the OSKA report and the strategy for vocational education and training. The admissions process and the activities aimed at identification of motivated learners are described in chapter 3.8.

Pupils' individual abilities and needs are taken into account and their development is supported in the process of studies as follows:

- Implementation of independent learning tasks in combination with different active learning methods;
- Counselling and supervision in relation to study matters;
- Individual study plans and individual agreements related to studies;
- Collaboration between a supervising teacher and a supervisor of practical training; in case of workplace-based study collaboration with the practice enterprise where a pupil is learning by working. 3-party feedback on practical training in school-based and workplace-based studies;
- Practical training in small groups, supporting individual and independent learning;
- A learner has an opportunity within their studies to be in the role of a teacher and provide a service to the community;
- If possible, choosing a practice enterprise and, if he or she wishes, performing practical training abroad.

The learning environment of the college enables the participation in studies by learners with physical special needs. Coping inside the study building by learners with visual special needs is supported. Individual interviews with the learners are carried out to identify their need for help. Development of tolerance is a principle followed throughout the whole period of studies.

Examples:

- To support persons with visual impairment the stairs are marked and an elevator in the dormitory is equipped with voice announcement;
- Numbers on the buttons inside the elevator can be read by touching;
- Toilets for a wheelchair user;
- An elevator is accessible to a wheelchair user.

Education and training as well as professional activity in the fields of social welfare and health care require physical and mental fitness and therefore learners with considerable physical, sensory and mental special needs do not cope within these fields, even with efficient support. Different abilities and preparation levels of learners are taken into account as much as possible based on their needs. For example, spelling mistakes in written papers of pupils with dyslexia and dysgraphia are not considered in assessment, only the content of the papers etc.

Alternative choices of learners are ensured as follows:

- Use of an individual study plan, if needed;
- A possibility to be transferred to another curriculum;
- On all curricula the elective subjects are offered in the amount that exceeds the standard volume; a possibility to participate in elective subjects meant for all learners of the college and complete the curriculum on the basis of recognition of prior learning and professional experience;
- Elective subjects are offered on the basis of the employer needs, learner interests and possibilities of the college that creates a need for constant widening of the list of elective subjects and revision of their content (Table 22);
- Work schedules of practical training periods are prepared on the basis of agreements between a learner and the supervisor, taking into account the learner's time resources and time limits. If possible, wishes of a learner are considered while choosing a practice enterprise (e.g. a child care institution that is located in the area where a learner lives, an opportunity to choose a site for the second practical training period);
- E-learning makes it possible for a learner to manage their time more efficiently and choose a suitable place for learning.

Table 22. Volume of elective subjects according to curricula

Study programme group	Curriculum	Mandatory Volume of elective subjects (ECVET)	Options (ECVET)
Social work and counselling	CW	20	31.75
	CWMHP	9	22
Child care and youth services	CM	9	20
Medical diagnostic and treatment technology	EMT	9	10.5
Therapy and rehabilitation	MAS	20	22

RPL

Implementation of the RPL principles is regulated by the RPL procedure established by the college. An application for recognition of prior learning or professional experience is submitted in the SIS. A pupil is provided counselling on the RPL procedure; the compliance of prior learning with learning outcomes is evaluated. A common reason for non-recognition of prior learning is that the required learning outcomes are not achieved (e.g. devices used in an activity have changed to the extent that prior performance is currently not acceptable) or the evidence about the performance is insufficient. Partial recognition is also possible, including the identification of the topics a learner has to attend within the current studies to complete the subjekt.

The RPL system has been used on the vocational training curricula since 2016, when 155 RPL application sets were submitted in the total volume of 356 ECVET credits; in 2018 the number of submitted RPL application sets was 398 in total volume of 1238.75 ECVET credits. (Figures 28 and 29).

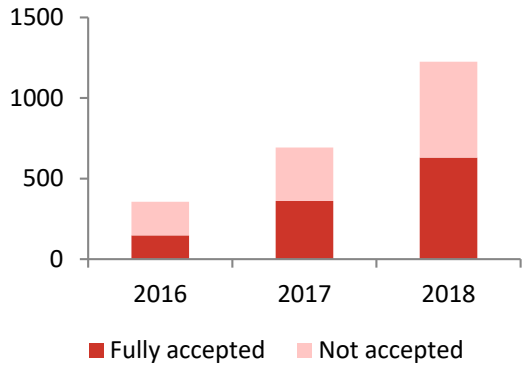


Figure 28. RPL statistics (in ECVET) in vocational training in 2016–2018

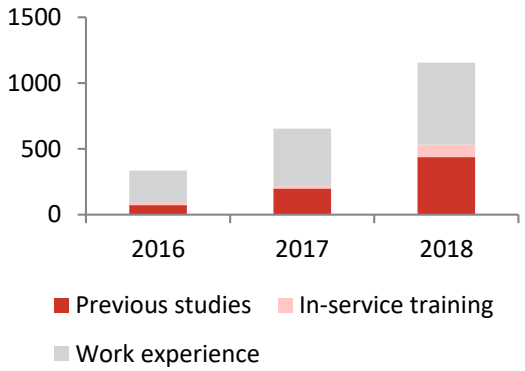


Figure 29. Implementation of RPL (in ECVET) in completion of vocational education in 2016–2018

Study content, study methods, assessment

Study methods

Learning outcomes of a module are related to assessment criteria, assessment tasks and topics within an implementation plan. The choice of study methods on the curriculum is based on learning outcomes and it is described in syllabi.

Examples of implemented study methods:

- enhanced lecture with e-support;
- seminar;
- discussion;
- scenario based task;
- practical task;
- pair work;
- e-learning;
- independent learning;
- study visit;
- demonstration;
- creative work;
- portfolio.

An increasing use of digital technologies is common in the study process of vocational education and training. Based on the experience we can say that it promotes the understanding of acquired knowledge and activates a learner.

Examples:

- All studies have e-support: a. Documentation of practical training is on Moodle, a number of e-courses and learning objects are currently in use; b. Individual supervision, if needed;
- All curricula include an elective subject on digital competences.

Supervision of and feedback on independent work

Independent written papers performed by pupils within the studies are described in syllabi, including the guidelines. Digital solutions facilitate the supervision of and giving feedback on different written papers (individually or in a group; online (email, Skype) and/or orally in seminars). The learners give currently feedback in the SIS after completion of a subject course. So far, there has been no negative feedback by learners on supervision.

Assessment

Assessment methods of vocational training curricula have been designed and described in implementation plans in collaboration of the representatives of schools providing education in the field. To support the use of different assessment methods teachers have an opportunity to participate in relevant training courses inside and outside the college. Assessment within a module is

designed in collaboration of the module team members. In general comprehensive summative assessment is preferred, preceded by formative assessment in the subjects. Formative assessment is an integral part of the study process.

The learners are informed of the learning outcomes, topics, study methods as well as of assessment criteria and assessment methods at the beginning of a subject course (chapters 3.8., 3.9., 3.10.). Feedback on a subject course, incl. assessment, can be given after the studies in the SIS. Based on the feedback given on the subject course the assessment criteria can be reviewed and revised, if required, but assessment is primarily based on learning outcomes and their achievement.

Assessment tasks are developed by a teacher who is in charge of the subject. In case of an extensive and complex subject more than one teacher are involved, each teacher assessing his or her part on the basis of assessment tasks developed by him or her. Assessment tasks can be developed in collaboration of all teachers engaged in teaching of a subject to ensure the achievement of learning outcomes and cohesion of topics. For example, the EMT curriculum includes a complex subject on patients with special needs at different ages where each teacher engaged in the subject participates in the development of an assessment task (case) based on their topic. Extensive written papers are coded for assessment to avoid the identification of the author of a paper by an assessor and ensure objectivity of the assessment. Extensive assessment is carried out by several assessors and the final result is reached by consensus.

Professional examination

The college has the right to award the profession and the lead teachers have gained experience in the organisation of professional examinations within two years. The learners are informed about the performance of the professional examination within the whole course of studies. Each year the task of professional examination is delivered to the college by the professional body awarding the profession. Two thirds of the members of assessment committees of the professional examination form the representatives of employers who have not participated in teaching in order to ensure objectivity of the assessment. An assessment task of the professional examination is developed by a professional body with the right to award the profession and delivered to the college each academic year.

- The CW professional examination (from 2017) consists of a structured written work (online) and a practical scenario based task. Each year an assessment task for the professional examination is delivered to schools by the Estonian Social Work Association which has the right to award the profession. Representatives of the employers participate in the assessment of the professional examination;
- The CM professional examination (from 2017) consists of an oral scenario based task (formerly a test), giving an opportunity to assess more adequately the knowledge and attitudes of a learner than a test. Practical skills are assessed in the course of training;
- The EMT professional examination (from 2018) consists of a structured written paper (online) and a practical scenario based task. The assessment task is developed in collaboration of the schools providing training in the field and the representatives of employers under the leadership of the Estonian Qualifications Authority;
- The CWMHP professional examination (from 2017) includes supervised independent learning tasks performed by the learners within several subjects (e.g. observation in relation to developmental psychology, assessment of client coping, use of support services depending on the needs of a client, motivating and activating a client, incl. practical training) forming a descriptive component of final work that is defended in the professional examination.

Practical training

The process of practical training at the college is described in chapter 3.8. Practical studies form 50% of the volume of vocational training curricula, including practical training in a working environment. All vocational training curricula are practical in nature; in the course of practical training are reinforced the acquired theoretical knowledge and practical skills as well as values and attitudes demonstrated by the supervisors of practical training in a working environment. It is essential to ensure the cohesion between the modules and give an output for a practice institution. For example, a health promotion project is designed within theoretical studies in module *Child health promotion* and the project is carried out during the first practical training period in a child care institution; the practice institution may re-use the project according to its needs.

Identification of institutions for practical training is facilitated by the studies specialist of the college who creates partnership relations with potential practice institutions. The pupils are also free to find a practice institution for themselves, although the suitability of an institution or enterprise for the achievement of learning outcomes of practical training is evaluated by the lead teacher of the curriculum.

Examples of practical training abroad on the curricula:

- On the CW curriculum is an opportunity for collaboration and performance of practical training in Finland, involving partner vocational schools Espoo OMNIA and Tampere TREDU as well as Jena SBBS für Gesundheit und Soziales in Germany;
- On the CM curriculum in Finland, involving the partner vocational schools Tampere TREDU. In 2018 a new partner school was added – Escola Técnica e Profissional do Ribatejo SA, Portugal, where within two years (2018-2020) four pupils of the curriculum perform their practical training for four weeks;
- Within two years, beginning with 2018, four pupils of the EMT curriculum have an opportunity to have their practical training in a partner school in Germany, Johanniter Akademie Bildungsinstitut Mitteldeutschland in Leipzig.

The achievement of learning outcomes of practical training is assessed in a 3-party assessment, involving a pupil, the supervisor of practical training and the supervising teacher from the college. Final assessment is documented by the supervising teacher based on analysis of practical training by a pupil and the assessment of the supervisor of practical training. In case of practical training abroad the principle of a 3-party assessment is also followed, meaning the implementation of the ECVET principles and recognition of the assessment given by a practice institution abroad. The supervisors of practical training use formative as well as summative assessment based on learning outcomes determined for practical training, activities performed within practical training and their analysis as well as self-analysis of a pupil at the end of practical training. Elements assessed during practical training involve, for example, theoretical knowledge and their implementation in practical activities; planning, analysis and evaluation of activities; teamwork; ethical and aesthetical behaviour; sense of responsibility.

Pupil feedback on practical training is recorded in the practice book, discussed in 3-party assessment and in a focus-group interview on graduation. The pupil feedback has been diverse, depending on the personal features of a pupil and possibilities of a practice institution. To avoid misunderstandings in a practice institution the information about the rights and obligations of a pupil and a practice institution is delivered to a practice institution in advance. If the rights and obligations are specified in advance misunderstandings and mistakes can be avoided and pupil feedback on the content and organisation of practical training is positive.

Practical training is performed according to an individual schedule. The pupils of workplace-based study have a 3-party agreement; other pupils have a contract of practical training. A learner may express their wishes about practice institutions and their wishes are satisfied in case learning outcomes can be achieved and a chosen practice institution is ready to supervise. The role and obligations of a learner and a teacher are specified in a syllabus, a preliminary agreement and the procedure for practical training of the college. The employers are offered training for supervisors of practical training (chapter 3.12.).

Graduates

The relevance of curricula and their compliance with the needs of the employers is also evidenced by the employment of graduates (Figure 30).

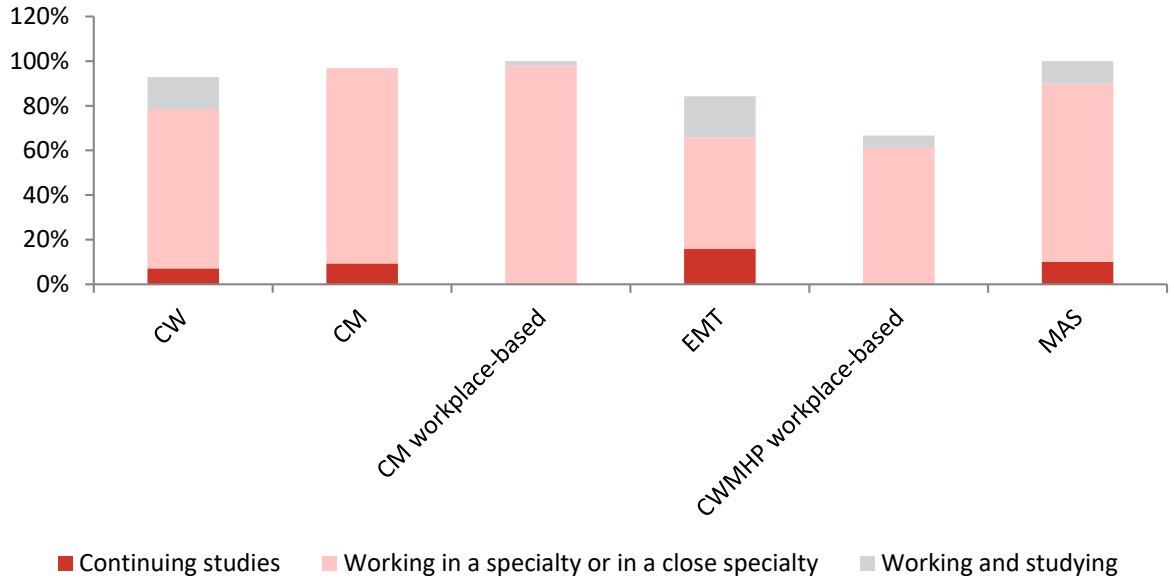


Figure 30. Employment among the graduates of vocational training in 2016/2017 and 2017/2018*
*Data of phone surveys in November 2017 and 2018

The award of the profession by the college is promoting considerably the graduates' competitiveness and the reputation of vocational education offered by the college. The proportion of the learners who pass successfully the professional examination is 98% at the college (students data) that is the highest result in comparison with other educational institutions providing vocational training (the average in Estonia is 60.5. HaridusSilm).

The number of the learners who discontinue their studies on the vocational training curricula has increased in recent years, but it is still lower than the respective average result in vocational education in Estonia (Table 21). The highest dropout rate is on the curriculum of CW in the study programme group of social work and counselling. The learners who decide to leave the college often justify their decision for example with a limited increase of salary after graduation that is not motivating them to study and also the employer's unwillingness to draw up a flexible working schedule to support studies. The employers in general are interested in educating their employees in the form of workplace-based study, but then the out-dated learning habits and skills in combination with a low self-esteem tend to become an obstacle.

Table 21. Dropout in vocational training in 2014–2018*

*HaridusSilm

YEAR	2014	2015	2016	2017	2018
THCC	6.9	9.5	15.8	18.9	18.2
Average**	21.8	20.3	19.2	19.5	21.7

** Average dropout in vocational education

Reasons for dropout:

- Insufficient academic progress 40%;
- On own initiative and inability to cope with family life, work and studies 30%;
- Non-attendance 20%;
- Unsuitability of speciality 10%.

The pupil feedback given on graduation highlights the knowledge and skills that improve their competence related to helping clients in practical work, conducting purposefully activities and avoiding burnout at work. The importance of teamwork and collaboration with different specialists is also emphasised in feedback, including a considerable impact of education and training on the development of these skills.

Examples of the following curriculum changes have been made based on the graduates feedback:

- The sequence of topics within a module *Care giving activities* was revised (CW).
- Promotion of collaboration with the practice institutions in order to obtain more information and a better overview about supervision of practical training in the practice institutions.

Competitiveness of the graduates is supported by the engagement of the learners in the organisation of joint events and in the promotion of the curriculum and the profession. For example, the learners are informed about an opportunity of voluntary participation in different events (e.g. researchers' night, open doors, fairs, community service, skills festivals etc.) and about the recognition of this voluntary participation in the completion of the curriculum (as an elective subject or practical training etc.). Active participants are rewarded by the college.

Strengths:

1. High quality of the studies and the level of the graduates is evidenced by the high percentage of pupils passing the professional examination on completion of their studies; a high employment rate in the specialist field and continuation of studies among the graduates;
2. Implementation of interprofessional training on the EMT curriculum (MODEX, collaboration with rescuers) and community service integrated into studies (CM, CW, MAS) enable the development of entrepreneurship, self-direction, creativity and innovativeness;
3. Modern learning environment, learning materials and technical equipment support comprehensively the provision of quality education and training.

Improvement area: an increased dropout rate on the CW curriculum. **Planned improvement activity:** detailed analysis of dropout reasons; contributing to the value of the care worker profession in collaboration with the employers.

4.4.3. TEACHING STAFF

Competition and development of the teaching staff at the college is described in chapters 3.2., 3.6., internationalisation in chapter 3.5., and the principles of academic ethics in chapter 3.4.

The working time and priority development activities of the teaching staff for next academic year are planned within development interviews in collaboration with the head of department on the basis of the development plan of the college, the needs of the department and wishes of a teacher. For in-service training of the teaching staff training courses are organised at the college; each academic year a teacher has an opportunity to participate in professional or pedagogical training courses or have training in a working environment in the volume of 60 hours. These activities are included in the working time of a teacher. The development of digital competences is supported by the learning designer who organises training for all teaching staff of the college or for a teaching team, depending on their needs. Support to the self-improvement of the teaching staff is specified in a document *The procedure for planning staff self-improvement and compensating the costs.* Effectiveness of training is analysed in the development interview on the basis of a teacher's self-analysis, identifying the following activities and an impact on the conduct of teaching and study. The knowledge, skills and experience gained within training is shared in meetings of the team and/or meetings of the college teaching staff. Experts in the field are engaged in teaching based on an authorisation agreement. For example, the experts of oriental massage and segment massage are engaged in the conduct of training on the MA curriculum.

The teaching staff members are encouraged to collaborate in the course of international development projects by sharing good practices and integrating the content and assessment of modules in the process of curriculum development. The teaching staff members participate in networks based on their professional field, experience and interests. Collaboration with the partner schools is conducted within international development projects. Collaboration with the partner schools is mostly related to the development of professional standards and curriculum development, but also to sharing good practices.

Strengths:

1. Development of the study process in continuous collaboration of the teaching staff from different curricula (incl. the higher education curricula), the involvement of practitioners in the study process and the creation of the lead teacher system ensure the systematic development of curricula content and the quality of the studies;
2. Participation of the teaching staff in the conduct of development projects in international collaboration and a high mobility rate support the professional and personal development of the teaching staff.

Improvement area: the lead teachers have full-time employment and in order to maintain their practical skills they need training in a working environment. **Planned improvement activity:** to draw up an individual lead teacher training plan for five years within development interviews; identification of additional opportunities for training in a working environment (incl. abroad). **Improvement area:** additional teaching staff resources are needed for the conduct of studies on new curricula and outside Tartu. **Planned improvement activity:** recruitment of experts and international teachers for the development and implementation of curricula; to plan collaboration with other curricula at the college (regarding the subjects developing general competences etc.).

5. APPENDICES

APPENDIX 1. CURRICULUM OF ENVIRONMENTAL HEALTH SPECIALIST

1. Curriculum
2. Syllabi
2.1. Drinking Water Quality and Quality Assurance
2.2. Enterprise and Career Planning
2.3. Introduction to the Speciality
2.4. Practical Training – Infectious Diseases and Epidemiology
2.5. Final Thesis
3. Table describing the interconnections between study programme modules

APPENDIX 2. CURRICULUM OF BIOMEDICAL LABORATORY SCIENCE

1. Curriculum
2. Syllabi
2.1. Communication Psychology
2.2. Laboratory Quality Management
2.3. Research Methology II
2.4. Technology in Laboratory of Pathology
2.5. Genetics and Molecular Diagnostics I
3. Table describing the interconnections between study programme modules

APPENDIX 3. CURRICULUM OF MIDWIFERY

1. Curriculum
2. Syllabi
2.1. Antennal Care
2.2. Fundamentals of Midwifery
2.3. Pathological Delivery and Puerperium
2.4. Practical Training Maternity Care I
2.5. Self Direction
3. Table describing the interconnections between study programme modules

APPENDIX 4. VOCATIONAL EDUCATION CURRICULA

1. Curriculum of Childminder
1.1. Implementation Plan of Modules of the Curriculum of the Childminder
1.2. Table describing the interconnections between study programme modules

2. Curriculum of Masseur/masseuse, Level 5
2.1. Implementation Plan of Modules of the Curriculum of the Masseur/Masseuse, Level 5
2.2. Table describing the interconnections between study programme modules

3. Curriculum of Care Worker
3.1. Table describing the interconnections between study programme modules

4. Curriculum of Emergency Medical Technician
4.1. Table describing the interconnections between study programme modules

5. Curriculum of Client Worker for People with Mental Health Problems
5.1. Table describing the interconnections between study programme modules

APPENDIX 5. TEACHING STAFF

APPENDIX 6. LIST OF FIGURES AND TABLES

APPENDIX 7. LIST OF LINKED DOCUMENTS

Title
Academic staffs' international and national presentations 2016–2018 (in Eng. and in Est.)
Action Plan 2019 (in Est.)
Applied research studies in Tartu Health Care College
Data of learners 2014–2018
Development of digital studies in 2016–2018
Ethical Principles of teaching staff at Tartu Health Care College
Events 2014–2018 (in Est.)
Graduates feedback 2016–2018
International and national development projects

Joint trainings for teachers 2016–2018
Key indicators and fulfilment of the development plan of the college
Learners involvement in international activities in 2016–2018
Major changes to curricula in 2016–2018
Participation in working groups, networks and associations 2016–2018
Procedure for practical training at Tartu Health Care College
Qualification requirements for ordinary and visiting teaching staff at Tartu Health Care College
Quality indicators
Quality manual (in Est.)
Rules of procedure for research and development board of Tartu Health Care College
Scheme of self-evaluation and report preparation process (in Est.)
Services to society (in Est.)
Statutes for administrative and support structure of Tartu Health Care College
Statutes for curricula of Tartu Health Care College
Statutes for study and research structure of Tartu Health Care College
Students recognition in 2016–2018
Students satisfaction with organisation of study and the study environment 2014–2018
Studies within international cooperation 2016–2018
Study Regulations
The Development Plan 2015–2020