

OECD THEMATIC REVIEW OF TERTIARY EDUCATION

Country Background Report for Estonia

Background documents

Estonian Ministry of Education and Research

November 2006

BACKGROUND DOCUMENTS

Estonian Higher Education Strategy, 2006–2015

FUNDAMENTALS

This document specifies the areas of development for Estonian higher education over the next 10 years. These developments as approved by the Parliament will provide guidance in future activities for the Government of the Republic, the ministries, the educational institutions providing higher education and student organizations. The elaboration of the strategy has relied on the following factors/developments that are currently influencing higher education in Estonia and elsewhere.

1. **Higher education is a universal level of education.** In developed countries, higher education is acquired by more than 50 % of the age group, the developmental and innovational capacity of the society depends ever more on the proportion of people having higher education.
2. **Quality determines the priorities.** The provision of higher education takes place on a worldwide open educational market in the relevant competition environment, and the quality of education has become a central factor of competition. It is in Estonia's interest to offer, in the European higher education space, competitive higher education in all spheres of activity that are pursued, and to reach for international top level in its main lines of activity.
3. **Ensuring fair access.** All capable students shall be provided with the opportunity to enter higher educational institutions irrespective of their place of residence, economic situation or special needs. The duty of the state/public sector is to ensure fair access with the only selection criteria being capability and readiness to acquire education.
4. **Student-oriented education.** Arrangement of higher education will become more student-centred - expectations, needs and preferences of students form the benchmark of higher education. Preferences of students shall be combined with the needs of society/labour market through information and vocational guidance.
5. **Participation of private sector in covering costs.** Higher education is considered to be both public and private good. The share of private sector financing in higher education is going to increase in Europe as well – ways and forms of introducing (partial) tuition fee are under discussion in most countries, and some countries have already introduced it.
6. **Public regulation and autonomy of educational institutions.** Establishment of enforcement of public quality requirements as well as public policy for financing higher education are used as the instruments for the public regulation of higher education. In substantive and organisational issues of teaching and research, educational institutions will remain autonomous, as being in charge of effective use of resources and performance.
7. **Increased expectations to the diversifying higher education sector.** Serious/historic expectations towards the European higher education sector - the institutions of higher education shall be “the activators of European brain potential” and leaders in achieving the Lisbon objectives. At the same time, missions, activity forms and target groups are becoming more varied.

OBJECTIVES

The objectives of the Estonian higher education sector for the next decade:

1. **To assure competitive quality of our higher education.** Internationally competitive quality of higher education offered in Estonia must be ensured. The aim is to create a situation where curricula of higher education offered in Estonia have passed assessment by accreditation agencies recognized in Europe and our academic mobility level reaches the average indicators of Europe.

2. **Higher education to serve Estonia's development interests and innovation.** Both teaching and research must be better tailored to the needs of the Estonian economy and the development of society. The objective is to involve all major society partners in planning of higher education and activities, as well as a much more visible role of the higher education sector as the driver of Estonian economic and social innovation/modernisation and as the integrator of Estonia into the political, economic and social networks of the European Union.
3. **To ensure a volume of higher education study responding to the needs of Estonia.** A volume of higher education study, which takes into account both the preferences of students and needs of labour market, responding to the needs of Estonian society shall be guaranteed. In 2006-2008, the state-commissioned education provides student places to at least 50 per cent of the students who have acquired general secondary education, and 10 per cent of the students who have acquired secondary vocational education. The objective is that by 2015 at least 12.5 % of population will be comprised in different study forms of lifelong learning.
4. **To develop a practical structure of Estonian higher education.** Supply of the fields of study/curricula by educational institutions shall take into account the needs and resources of Estonia. The objective is a clear work sharing between educational institutions, equal orientation of academic and applied higher education to the needs of labour market and reduction of the number of curricula, as well as legalisation and implementation of common curricula.
5. **To ensure the development of Estonian-language educational and cultural sphere.** Continuation and development of higher education study in the Estonian language in the European open education space must be ensured. The objective is to make higher education in Estonian available in all fields and on all levels of study.
6. **To promote the social dimension of higher education.** The system of social guarantees for students must afford fair access to higher education and devotion to studying. Attention must be paid to the establishment of necessary preconditions for extra-curricular aspects of student life.

The implementation of the strategy will be guaranteed by the Parliament and the Government of the Republic by means of legislation, funding and consultative cooperation. The strategy will be implemented in cooperation with major partners, such as independent universities in public law, private and public higher education institutions, student organisations, vocational educational institutions, employers and representatives of the non-profit sector. The Advisory Committee on Higher Education will be established for managing cooperation between the partners.

LINES OF ACTION

In order to achieve the objectives set, the parties to the strategy undertake to focus their efforts on the following four areas of activity:

1. Improving association of higher education with expectations of the society and students and the needs of labour market;
2. Strengthening quality assurance;
3. Development of curricula and internationalisation of Estonian higher education;
4. Development and implementation of a new funding scheme.

LINE OF ACTION 1: ASSOCIATING HIGHER EDUCATION WITH THE NEEDS OF ESTONIAN SOCIETY AND EXPECTATIONS OF LABOUR MARKET

The objective is development of national higher education system, which takes into account Estonian development and innovation interests and uses rationally Estonian resources

Activities

1. In order to improve compliance with developments of labour market upon development of volumes and structure of higher education, an *analysis and prognosis system* shall be created where developments on labour market will be analysed by professional groups and economic sectors, as well as employment of graduates from higher education institutions by economic sectors, professional groups and areas of specialisation. Education institutions involve

- employers and other partners in strategy development of institutions and development of curricula.
2. National vocational guidance system based on common principles shall be developed which will take into consideration the developments in the society and on the labour market and will enable students to find suitable curricula corresponding to their interests and abilities and will facilitate choices as to the area of specialisation. Career guidance courses shall be added to curricula of teacher training and a study module shall be created for preparing career advisors working in basic schools.
 3. Access to *in-service training and re-training* and to adult formal education shall be ensured to at least 12.5 % of the 25-64-year old population. For this purpose, state support principles for adult formal education shall be developed. Measures, which enable compatibility of studies with work and family life, will be worked out.
 4. State shall support innovative activities of higher education institutions, including connecting studies with research and development, implementing results of research in practice and cooperation between educational institutions and enterprises.
 5. *Access of students with special needs* to higher education will be supported, including state grants and subsistence allowances and facilities by educational institutions.
 6. The system of study allowances shall be developed for part-time Doctoral candidates.
 7. Students who do not speak Estonian as their mother tongue will have access with state support to *Estonian language study* of up to one extra year in duration.
 8. In order to increase interest of young people to study in the field of *natural and exact sciences, and engineering* a complex of measures shall be started, including state grants, providing respective subjects in basic schools, upper secondary schools and vocational educational institutions within the framework of elective subjects, state support to technical and youth clubs and training in pedagogy for teaching at higher education institutions for the teaching staff in relevant areas.
 9. The number of student places subject to state-commissioned education shall be presented to institutions of higher education which offer formal education in the areas associated with the specifics of the region, provide in-service training to specialists with higher education to an appreciable extent, implement development projects in the fields important for the region and possess a critical mass of students.
 10. Develop further the existing e-learning centres where it is possible to study on the basis of curricula of higher educational institutions joined with e-universities and e-vocational educational institutions, state support shall be ensured to education technologists and tutors of e-learning.
 11. Within the framework of a pilot project, young people will be provided with access to professional higher education study after the completion of secondary vocational education based on basic education, without sitting for state examinations. After an analysis of the experience, a decision will be made as to whether this opportunity should be made the rule.
 12. In order to receive feedback from developments in higher education and to develop reasoned trends of the sector, new supportive measures shall be launched as of 2007 on the basis of implementation plan.

Evaluation

Developments in Action 1 shall be evaluated on the basis of following indicators: *the proportion of people with higher education of population, number of primary graduates per year, rate of unemployment among people with higher education, number of vacant positions where university qualifications are required, proportion of people who have ceased learning, proportion of graduates in the areas of natural and exact sciences, and engineering, number of cooperation projects between higher educational institutions and undertakings, proportion of the 25-64-year old population in lifelong learning, role of educational research in development of educational decisions.*

LINE OF ACTION 2: Quality assurance

The objective is to develop a binary quality assurance system, which contains, on one hand, internal quality assurance of educational institutions and, on the other hand, establishment of quality requirements and supervision of quality by state.

Activities

1. Higher education can be acquired in higher education institutions, which have the sole right to issue the relevant certificates of education. Law provides exceptions. Higher education institutions will be divided into professional higher education institutions, universities, and colleges administered by universities. The names of (higher) education institutions (or other persons or institutions) must not be misleading regarding the education offered in those institutions. Vocational educational institutions may provide instruction of a short cycle on the third level which graduates will not be awarded a diploma certifying higher education.
2. Institutions may use the word *ülikool* (university) in their names, if they have positively accredited research teams and Doctoral study programs in at least two fields of study. A more narrowly specialised higher education institution will also fall under the category of university as a type of institution, if it has a positively evaluated research work in at least one field of study, but it may not use the word *ülikool* in its name.
3. The Standard of Higher Education – stipulating the requirements for persons operating higher education institutions, for study environments in higher education institutions, academic staff and study programmes – will be updated.
4. The Universities Act will stipulate the basic points of quality contracts with the universities, setting the requirements for candidates to the positions of professor and docent, for curricula and for procedural issues for the defence of theses, as well as the arrangement of quality supervision by the Ministry of Education and Research.
5. Quality estimating and practical division of labour will be pursued upon providing higher education, for that reason issue of licences of new generation shall be implemented. The initial education licence for already operating higher education institutions will be issued by the Government of the Republic, on proposal of quality assessment by the Ministry of Education and Research, which will provide the higher education institution the right to issue state documents confirming education attained (diplomas). The Accreditation Centre bases the quality assessment used by the Ministry of Education and Research on recommendation provided by sectoral groups of experts. All existing higher education institutions shall submit application on new licence by 1 September 2008, at the latest.
6. A new licence shall be issued on the basis of an application of the educational institution with data concerning compliance with requirements stipulated in the Standard of Higher Education and the assessment by the MoER on justification and purposefulness of issue of the licence. The education licence will provide the higher education institution the right to issue state documents confirming education attained (diplomas) within the curricula of relevant fields of study specified on the licence. Issuing a licence for Doctoral studies will require a previous positive evaluation of the relevant research area.
7. On the basis of the education licence of the higher education institution, the Ministry of Education and Research will register the curricula of the relevant field of study in accordance with the requirements of the Standard of Higher Education.
8. In order to open a new field of study or study on a new level of study (also to set up a new educational institution), the educational institution will apply for a licence from the Government of the Republic. A licence for each level of study will be issued separately.
9. Accreditation will become an international assessment of the activity of higher education institutions, where the standard of a certain field of study in the higher education institution will be compared with other similar recognised higher education institutions, and the educational institution will be given constructive feedback for planning future developments. In the accreditation process, diplomas will no longer need to provide the security accorded by state recognition, but is directed to continuous improvement of the quality of study.
10. Accreditation will generally take place according to the field of study and will be obligatory every seven years. Assessment by field of study will take place simultaneously on the level of professional higher education, Bachelor's study and Master's study. The assessment of Doctoral study programmes will be combined with the evaluation of the relevant research area. Since 2007, institutional accreditation will be obligatory together with accreditation based on the field of study.
11. Accreditation will be organised by the Estonian Higher Education Accreditation Centre, in its

operation, will proceed from internationally comparable principles, criteria and instructions. The Centre will be registered in the planned European Higher Education Quality Assurance Register, and its membership shall be widened with the representatives of professional associations and students.

12. The Higher Education Quality Assessment Council (HEQAC) shall inform the Ministry of Education and Research about the results of accreditation. In the case of serious deficiencies, the HEQAC will have the right to propose to the MoER that the process of withdrawing the licence be initiated for the relevant field of study at the educational institution.
13. Besides the HEQAC, higher education institutions will have the right to use the services of the accreditation agencies registered in the European Higher Education Quality Assurance Register.
14. All Estonian higher education institutions are obliged to start the internal quality assurance system, which will proceed from international good practice. The respective obligation will be specified in the Universities Act and in the Institutions of Professional Higher Education Act. Higher education institutions have right to set up higher quality requirements than specified by law. By 1 September 2007, the Register of Teaching Staff shall be established by the Estonian Education Information System, which will determine the teaching staff by each educational institution.
15. Private professional higher education institutions and private universities will operate in Estonia as institutions of registered legal persons, but one legal person may operate only one higher education institution, and no other areas of operation will be permitted besides the provision of higher education and activities directly associated with this (research and development activity, cultural activity, etc), which must be stipulated in the statutes of this person.

Evaluation

Developments in Action 2 shall be assessed on the basis of the following indicators: *the number of higher education institutions which have passed the procedures of external quality assessment (including accreditation, supervision) and acquired the licence, assessments given to education activities of Estonian higher education institutions by internationally recognized accreditation agencies, proportion of higher education institutions and fields of study where internal quality assurance of educational institutions and the quality assurance system in compliance with international practice has been started.*

LINE OF ACTION 3: DEVELOPMENT OF CURRICULA AND INTERNATIONALISATION

Objectives. The objective in curricula development is more compact curricula decrease of curricula, legalization and implementation of joint curricula, curricula (also Bachelor's level) orientation on expected competences on the market, ensuring sustainability of Estonian-language higher education. As to internationalisation, the objective is to increase quality and international credibility of Estonian higher education, which will be, implemented through mobility of students, teaching staff and scientists, involvement of competence and development of joint curricula.

Activities

1. All curricula shall be furnished with descriptions of acquired competence necessary for completion of studies. The state will support development of competence-based curricula by providing the teaching staff with information and training concerning modern curricula development, teaching methods and acquisition and assessment of competence.
2. All study programmes (including Bachelor study) will provide access to the labour market. For this reason the relative importance of practice shall be increased in higher education studies, associating practice more clearly with the competence and qualification acquired during completion of curricula. The professional standards and the need for in-service training will be taken into account in developing curricula (incl. in-service training).
3. Curricula will increase options of students and support individualisation of studies, encourage academic mobility between Estonian higher education institutions, including development of joint curricula between education institutions. Legal acts will be prepared which will enable joint curricula and joint degrees and joint diplomas (2006).
4. Principles for the recognition of previous studies and work experience in performance of curricula shall be developed and implemented.
5. The national strategy comprising internationalisation of Estonian higher education shall be developed and implemented which foresees bringing of highly qualified specialists (teaching staff,

top specialists in particular professions) to Estonia, supporting the mobility of our teaching staff and students, starting up study programmes that have been developed in cooperation with foreign higher education institutions, supporting studies of foreign students in Estonia.

6. Widening multilingual Doctoral studies and participation of Estonian Doctoral students in international networks of Doctoral studies. A scheme will be initiated whereby every Doctoral student defending a degree at an Estonian university must learn/work abroad for up to one semester. The cost for the Doctoral student to study for a short period abroad will be covered for the universities from the resources allocated to Doctoral studies.
7. Bringing foreign Doctoral students to Estonia will be supported, opening SCE student places to foreigners on the same basis as for Estonian residents. The system of Post Doctoral Studies will be implemented which is also open for foreigners.
8. The results and effect of the Kristjan Jaagu scholarship programme will be analysed and the prospective volume and organisational scheme will be developed for the programme.
9. In accordance with the Strategy for Developing the Estonian Language (2004–2010), the compilation of Estonian-language higher education textbooks and teaching materials will be supported, including starting a state programme for Estonian-language higher education textbooks and speciality dictionaries (2006) by the MOER.
10. In order to improve specialty Estonian-language skills, students will be able to take Estonian language study to the extent of at least one credit point. Estonian-language teaching software will be worked out; compilation of Estonian-language teaching materials will be supported.

Evaluation

Developments in Action 3 shall be assessed on the basis of the following indicators: *proportion of competence based curricula, extent of principles for the recognition of previous studies and work experience in performance of curricula, proportion of permanent teaching staff positions to foreigners (by 2015, at least 10 %), proportion of foreign Doctoral students and post-doctoral students in Estonian universities (by 2015, at least 3 %), number of foreign students by 2015 – 2,000, including the EU mobility programmes, number of full-time foreign students studying in Estonian higher education institutions (by 2015, at least 2,000), proportion of joint curricula.*

Line of action 4: Modernisation of funding system

Objective is to achieve, by 2008, the level of funding (public and private) per student that is comparable to the average of OECD countries, at the same time preserving access to higher education at a level comparable to OECD countries.

Activities

1. The system of the state-commissioned education will be reformed, by adopting three-year performance contracts for financing of higher education institutions from the state budget (since 2008); effectiveness and quality of the study, the actual number of graduates, and the needs of Estonia shall be taken into consideration for an operating grant.
2. Student places financed from the state budget will be created on the first stage of higher education for at least 50 % of those who have acquired general secondary education, enabling approximately 6300 young people to begin studies at the first stage of higher education with the support of the state (2005–2008). In order to better link secondary vocational education based on basic education with professional higher education, resources will be allocated to at least 10 % of graduates from vocational education institutions, preferably to curricula of professional higher education in areas of natural and exact sciences, and engineering.
3. Until 2013, up to 50 % of Doctoral study and 10 % of other levels of study subject to SCE will not be set by the state according to the field of study and this will be allocated directly to universities. For the remainder of the SCE, in determining the proportion for the field of study, the starting point will be the needs of society, international trends and the quality of curricula. Public funding of overlapping curricula with under critical academic competence and quality shall be terminated.
4. The number of doctoral-level studies and Post Doctoral Studies subject to state-commissioned education shall be increased, taking into account the increased need for specialists with Doctoral level degree outside the academic sector. The goal will be to attain, by 2015, the EU average thesis defence rate, and at least 300 thesis defences annually. Social guarantees which are not covered by study allowances (e.g. parental benefit) shall be made available to Doctoral candidates.

5. Required means for current investments shall be planned as of 2007 as a percentage of the state-commissioned education and shall be included in operating grants of educational institutions. In 2006, the measures which planned volume is approximately EEK 400 million per year during ten years, meant for updating the infrastructure of higher education shall be prepared on the basis of the implementation plan. With introduction of development measure of infrastructure of the European Regional Development Fund, national co-financing shall be ensured for projects where the public sector is the beneficiary.
6. The proportion of finances directed to higher education via targeted state programmes will be maintained at 10–20 % of the total expenditures by the state in higher education (except resources of Structural Funds).
7. The bases for supporting the activity of research libraries, as well as the joint supply of databases, information system and e-learning software platforms will be developed, ensuring, by 2008 at the latest, an increase in state support to research libraries. State support to universities for development of ICT within the framework of the Tiger University and support of institutions of professional higher education within the framework of the project of e-vocational education institution will be continued.
8. In order that higher education expenditures are more clearly determined, the expenditures connected with a resident physician, which according to international statistics are not part of educational expenditures, will be transferred from the budget of the Ministry of Education and Research to the budget of the Ministry of Social Affairs.
9. On the basis of an analysis of the amount of educational expenditures funded by the private sector, proposals will be developed during 2006 on encouraging the inclusion of private capital. The possibilities for implementing alternative funding models, and the effects as demonstrated by other countries, will be analysed, proposals on pertinent approach to Estonia will be developed.
10. Measure, which will ensure students equal opportunities regarding access to higher education, will be worked out on the basis of analysis of the socio-economic situation of students. The system of social guarantees will be analysed in complex, including expediency to write off a study loan funded from the budget of public sector will be assessed.

Evaluation

Developments in action 4 shall be assessed on the basis of the following indicators: *level of funding per student, share of private capital in funding the higher education, number of higher education institutions with internationally competitive study environments, access to modern research and information systems.*

IMPLEMENTATION OF THE STRATEGY

1. Every second year, the Ministry of Education and Research will assess movement towards the strategic goals and will draw up the respective review. The review shall be discussed with the partners, where after the planned activities and goals shall be adjusted in the strategy.
2. As from 2007, coordinated actions for implementing education studies will be launched – in this framework the key problems of the education sector (needs of the society, efficiency, access, international comparison) and will be analysed and proposals will be developed on this basis for adjusting the strategy.

QUALITY AGREEMENT

Between Estonian public universities On curricula, academic positions and academic degrees

Desirous of strengthening the competitiveness of Estonian education in Europe and the world, considering high quality university education as the main precondition for the development of Estonia, and supporting the development of an integrated university area in Estonia,

Estonian Academy of Arts, Estonian Academy of Music, Estonian Agricultural University, Tallinn Pedagogical University, Tallinn University of Technology and University of Tartu (hereinafter the "*Parties*") consider joint operation in assuring the quality of university education very important, including the establishment of common academic standards.

In the first Quality Agreement the Parties agree upon the following:

1. The Parties shall harmonise the quality requirements for curricula (Annex 1), academic degrees being awarded (Annex 2) and academic positions in universities (Annex 3).
2. The Parties shall bring the rules regulating their curricula, the awarding of academic degrees and the filling of academic positions into conformity with the provisions of this Agreement by the beginning of the academic year 2004/2005.
3. The Parties shall make public the rules regulating their curricula, the awarding of academic degrees and the filling of academic positions. The information on the opening and implementation of a curriculum, defence of academic degrees and on the filling of a specific academic position shall be made available for interested persons.
4. All interested persons may make claims arising from the observance of provisions of this Agreement to the university concerned or to the Rectors' Conference. Each year in September the Rectors' Conference shall discuss the observance of the Agreement during the previous calendar year.
5. The Parties shall continue the cooperation to develop a single quality system established by successive quality agreements.
6. The Parties encourage all Estonian universities to join this Agreement.

Signed at Türi on 11 June 2003 and drawn up in six originals of equal legal force of which each Party shall get one.

Ando Keskküla, Rector
Estonian Academy of Arts

Peep Lassmann, Rector
Estonian Academy of Music

Alar Karis, Rector
Estonian Agricultural University

Mati Heidmets, Rector
Tallinn Pedagogical University

Andres Keevallik, Rector
Tallinn University of Technology

Jaak Aaviksoo, Rector
University of Tartu

Requirements for curricula

OPENING OF CURRICULUM

1. The basis of the opening of a curriculum shall be
 - The justification of the necessity for opening the curriculum
 - Subject annotations
 - Employers' recommendation
 - Expert opinions from recognised universities in Estonia and/or abroad
 - The description of resources necessary for study or the analysis of the necessity of extra resources
 - The description of the academic and professional requirements for the teaching staff
 - The proposed admission number for the next three years
2. The precondition for the opening of a curriculum shall be adequate academic and material resources and clearly justified necessity for the curriculum.
3. In addition to the conditions above, the precondition for the opening of a curriculum of doctoral study shall be a positively evaluated field of research at the university corresponding to the profile of the proposed curriculum.
4. The council of the university, faculty or college shall initiate the opening of a curriculum. The council of the university shall approve the curriculum.

STRUCTURE OF CURRICULUM

5. Optional and minor subjects of a curriculum shall be specified as follows:
 - *A minor subject* – a subject chosen by a student from the subjects determined by the curriculum to complete the curriculum
 - *An optional subject* – a subject chosen by a student from the home university or from some other university to complete the curriculum
6. The extent of final papers shall be standardised at the universities as follows:

• Bachelor's thesis/degree examination	4–6 credits
• Master's thesis	10–20 credits
• Master's degree examination(s) – in the case of curricula ending with Master's degree examination(s)	10 credits
7. The proportion of optional and minor subjects in successive curricula of bachelor's and master's study shall be a minimum of 15 per cent, including optional subjects of at least 4 per cent.

ADMISSION TO CURRICULA

8. In the case of 3+2 curricula, all persons with appropriate basic education, including graduates in bachelor's study/professional higher education study from other faculties and other universities/institutions of higher education, may apply.
9. As for the admission to master's study, a university shall publish a ranking within specialties for all candidates whose previous studies allow them to continue their studies in master's study.

Organisational issues

10. Universities shall create a joint register of subjects taught in English not later than by 1 January 2004.
11. Universities shall harmonise the organisation of quality assurance of their curricula in order to form a system of quality assurance in all universities not later than by 1 September 2004.
12. Universities shall form working groups to develop competence-based output descriptions of similar curricula.
13. Universities shall cooperate to introduce the European Credit Transfer System at the same time.

Requirements for academic degrees

Names of academic degrees

1. Estonian universities shall award three different academic degrees – *bachelor's, master's and doctoral degrees* – *doctoral degrees* being research degrees.
2. The names of academic degrees shall be established by a regulation of the Government of the Republic.

Right to award academic degrees

3. The body awarding academic degrees shall be called a defence committee, which may be the council of the university, a faculty, a department, or an institute, or a body formed by one of the above and it may include members outside the council. To ensure the comparability of academic degrees awarded by different universities, it is recommended to include representatives from other universities in the composition of defence committees.
4. Upon a resolution of the council of the university, faculties may form joint committees to award master's and doctoral degrees in accordance with curricula, which combine different fields of research.
5. Bachelor's degrees can be awarded in accordance with a curriculum approved by the council of the university and the defence committee shall consist of a minimum of two members, at least one of who holds a doctoral degree or has qualifications equal thereto.
6. Master's degrees can be awarded in accordance with a curriculum approved by the council of the university and the defence committee shall consist of a minimum of three members, at least two of who hold a doctoral degree or have qualifications equal thereto.
7. Doctoral degrees can be awarded in accordance with a curriculum approved by the council of the university and the defence committee shall consist of a minimum of five members who hold a doctoral degree or have qualifications equal thereto.

Right to supervise master's and doctoral theses

8. A person who holds a master's or doctoral degree obtained in the Republic of Estonia or has qualifications equal thereto may supervise master's theses.
9. A person who holds a doctoral degree obtained in the Republic of Estonia or has qualifications equal thereto may supervise doctoral theses.

Requirements for master's theses

10. A master's thesis must be an independent research or developmental or other creative work which presents an analysis of the problem, formulates a goal and presents a solution to the problem in the respective specialty.
11. Councils of a faculty, department or institute shall establish the requirements for the theses.

Requirements for doctoral theses

12. A doctoral thesis must be an independent research or developmental work, which presents an original solution to a significant problem in the respective field of research or life. In the artistic fields, a doctoral thesis may also be an internationally recognised creative activity accompanied by a scientific analysis or study.
13. A doctoral thesis constitutes (1) an independent study published as a dissertation, or (2) a series of publications supplied with a summary survey, or (3) a published monograph.

14. If not restricted by law or contract, the publication of results is one of the main features of a doctoral thesis. In general, a doctoral thesis consisting of a research work presumes the publication of three academic publications at a minimum. Academic publications are articles published in international peer-reviewed journals and collections and also in peer-reviewed Internet journals; and books (monographs, university textbooks) published by reputable publishing houses (peer-reviewed with ISBN and/or ISSN). A patent is considered to be equal to an academic publication. In the case of creative activities, a public concert, performance, exhibition or other public presentations are equal to publications.
15. The number of publications may be smaller if the dean or the body designated for thesis defence approvals decides so.
16. A doctoral thesis may be approved for defence if the articles forming the basis of the thesis have not been published but there is an official confirmation of the acceptance for publication.
17. In the case of a published monograph no separate text of a thesis is required.
18. The minimum circulation of a doctoral thesis is 70.

Defence of theses

19. One reviewer/opponent or, in exceptional cases, two reviewers/opponents shall be appointed to a master's and doctoral thesis and they must hold an academic degree at least equal to the degree sought by the applicant.
20. The defence of a master's and doctoral thesis shall take place at the meeting of the defence committee as a public academic discussion and it may occur only if attended by the applicant and at least one of the reviewers/opponents (in the case of a doctoral thesis, the opponent outside the university).
21. A defence committee has a quorum if at least 5 (in the case of a doctoral thesis) and 2 (in the case of a master's thesis) members are present, additional members included, with appropriate academic degrees, including a required number with doctoral degrees.
22. The opponent (one opponent in the case of two opponents) of a doctoral thesis must be outside the university where the thesis was prepared.
23. The defence committee may revoke its decision, if data presented in the master's or doctoral thesis are proven to be falsified or plagiarised. The relevant decision of the defence committee shall be made public.

Settlement of disputes concerning academic degrees

24. The council of the university shall establish the procedure for the settlement of disputes concerning academic degrees.

Requirements for academic positions

General principles

1. These requirements shall establish the requirements for applicants for professor, docent, lecturer, assistant and teacher positions filled by the way of public competition at universities.
2. Upon applying for a position, an applicant's previous activities, including research work and the results of research evaluation, teaching and creative activities, participation in expert committees in the field of training, research and creative activities, etc., shall be taken into account.
3. An applicant shall not be permitted to the competition if he/she has repeatedly got very low ratings to his/her teaching work from students (compared to the average at a university/faculty) or has committed any grave violation against the Code of Ethics of Estonian Scientists.
4. It is presumed that an applicant is familiar with modern study aids and teaching methods, has compiled study aids and methodological materials, and is improving teaching methods of his/her field.
5. It is expected that a member of the teaching staff actively improve his/her skills and knowledge necessary for teaching, research and creative activities.

Requirements for professorial candidates

6. A nationally and internationally recognised specialist who has experience in teaching and research, or in other creative activities, and who holds a doctoral degree or has qualifications equal thereto may apply for a position of professor.
7. Upon the first election, a precondition to participate in the competition shall be teaching experience at an institution of higher education, ideally including successful supervision of master's and doctoral students.
8. A constant international research and/or other creative activity shall be required.
9. A professor must be competent to organise the teaching of his/her specialty and must ensure a consistent flow of new academic generations. The performance of master's and doctoral study is the main success indicator for a professor's work.
10. A professor is able to direct research and development of his/her subject area and to seek resources needed for it. A professor is responsible for the improvement of teaching methods, the development and renewal of curricula in his/her subject area. A professor supervises members of the teaching staff involved in teaching subjects of the professor's specialty.

Requirements for docent candidates

11. A person who has experience in teaching and research or other creative activity and holds a doctoral degree or has qualifications equal thereto may apply for a position of docent.
12. Upon the first election, a precondition to participate in the competition shall be teaching experience at an institution of higher education, ideally including successful supervision of master's students.
13. A continuous nationally and internationally recognised research and/or other creative activity during the previous five years shall be required.

14. A docent is able to direct teaching at all academic levels (including the supervision of doctoral students) and to participate in the appropriate research. The performance of supervision of bachelor and master's students is a relevant success indicator for a docent's work. A docent deals with the improvement of teaching methodology of his/her subject area and participates in the development related to his/her specialty.
15. A docent is competent to supervise the research work by younger members of the teaching and research staff and is successful at initiating and implementing research and/or development projects.

Requirements for lecturer candidates

16. A person who has teaching experience and who holds at least a master's degree or has qualifications equal thereto may apply for a position of lecturer. Upon the first election, a desirable precondition shall be teaching experience at an institution of higher education, including the supervision of students.
17. A lecturer may teach at the first two academic levels, including presenting lectures, giving examinations and pass/fail examinations, and supervising bachelor and master's students.
18. A lecturer may participate in research under a professor's, docent's or senior researcher's supervision.

Requirements for assistant candidates

19. A person who holds at least a master's degree or has qualifications equal thereto may apply for a position of assistant.
20. An assistant is a member of the auxiliary teaching staff with professional qualifications.
21. An assistant's main task is to direct seminars, practical training classes and practice sessions at the first two academic levels. An assistant has the right to give pass/fail examinations. A professor may assign a limited amount of lectures, the supervision and review of semester papers or projects to an assistant and, in the case of sufficient experience, also the supervision and review of final papers at the first academic level.

Requirements for teacher candidates

22. A person who holds at least a master's degree or has qualifications equal thereto may apply for a position of teacher.
23. A teacher performs teaching tasks of a practical nature.
24. A teacher's main task is to direct practical training classes, practice sessions and other tasks of a practical nature at the first two academic levels. A teacher has the right to give pass/fail examinations and examinations in his/her subject.
25. A professor may assign the supervision and review of semester papers or projects to a teacher and, in the case of sufficient experience, also the supervision and review of final papers at the first academic level.
26. A teacher has no responsibility for research and/or other creative activities.

ANNEX 4. QUALITY INDICATORS OF UNIVERSITIES (APPROVED BY THE MEETING OF THE EXECUTIVE BOARD OF RECTORS' CONFERENCE ON 20 OCTOBER 2004)

Role of quality indicators

Quality indicators are agreed characteristics typifying the development and status of quality assurance at the university concerned.

Quality indicators enable one to:

- evaluate the implementation of the Quality Agreement by universities
- give objective information to the university's management about the performance of quality assurance at the university and on the relevant indicators of neighbour universities.

Quality indicators shall not be used as a basis for rating the universities or for allocating resources.

Quality indicators require data collection, processing and presentation in accordance with a uniform form agreed upon between universities. The list of indicators and the form of the summary developed by the quality assurance working group passed a methodological check at the seminar of universities on 27 May 2004. Quality indicators adjusted at the seminar are given in the subsection below.

List of quality indicators

Quality management system of the education process at university

- Are the quality management procedures for the education process planned and regular?
- Does the university use the quality manual?

Institutional evaluation

- Has the university passed an institutional evaluation or is it preparing for it?
- The name of the institution who conducted the institutional evaluation and a short summary of the results

University's curricula and their accreditation

- Has the university's legislation been brought into conformity with the Annex 1 of the Quality Agreement?
- The status of curriculum accreditation by academic levels on a given date:
 - Full accreditation
 - Conditional accreditation
 - Non-accredited

- Curricula, of which less than 2/3 has been completed and not submitted for accreditation
- Curricula, of which more than 2/3 has been completed but not submitted for accreditation

Teaching and research/creative qualifications of the academic staff. Selection criteria for the staff.

- Has the university's legislation been brought into conformity with the Annex 3 of the Quality Agreement?
- Short description of professorships elections
- Total number of professor positions/filled on a given date
- How many professors were elected during a given period/how many of them for the first time?
- Average number of candidates for one position during a given period
- Renewal of the docent and assistant staff during a given period (full-time positions separately), percentage.

Academic mobility in a given period. Involvement of visiting teachers. International students.

- Mobile students (absolute numbers and percentage in relation to the total number of students of the university)
- Domestic mobility (incoming students, outgoing students; add data on credits per mobile student)
- International mobility (incoming students, outgoing students) – international students and students enrolled at the university separately
- International mobility of the teaching staff (incoming and outgoing teachers) (absolute numbers and percentage in relation to the number of the members of the teaching staff of the university)

Feedback from employers and alumni in a given period. Graduate employment.

- Is there regular feedback collection from employers?
- Feedback from alumni (career beginning study)
- Data on graduate employment (including the Labour Market Board's data on graduates who have registered themselves as unemployed in a given period)

Students' opinion of the teaching staff and the organisation of studies.

- Are students' opinion polls conducted regularly?
- Has the university established the procedures for using the results of opinion polls and the rules how to give one access to them?

The application of modern methods of information technology necessary for the completion of curricula.

- The sum invested in information technology per student in a given period, in EEK

- E-subjects ready to be taught¹
- The percentage of e-subjects in relation to subjects taught in a given period

Output-based evaluation of curricula

- Are the proposed outputs – expected knowledge, skills, abilities and values of graduates – established in curricula (see clause 8)?
- Has the method for output-based evaluation been developed?
- Has employers' opinion of graduates' personal characteristics and professional competence been found out (see also sub-clause 4.5)? If so, add a short summary of the results

Library

- The sum invested in information carriers per student in a given period, in EEK
- Information carriers (titles) got in a given period
- Computer work stations in the library per student

Doctoral study

(Both state-commissioned study and non-state-commissioned study are considered)

- Has the university's legislation been brought into conformity with the Annex 2 of the Quality Agreement?
- Defended doctoral theses in given years (as a rule, during the previous three years)
- Ratio – defended doctoral theses in given years / number of professors² in those years
- Ratio – number of students enrolled in doctoral study / number of doctoral students who defended their thesis (as a rule, during the previous five years)
- Average time spent for studies starting from entrance to defence (including an academic leave), in years (as a rule during the previous three years)
- Post-doctoral study in given years
 - number of students enrolled in the university concerned
 - number of students directed to other universities

Master's study

(Both state-commissioned study and non-state-commissioned study are considered)

- Defended master's theses in given years (as a rule, during the previous three years)
- Ratio – number of students enrolled in master's study / number of master's students who defended their thesis (as a rule, during the previous three years)

¹ E-subjects are subjects acquired by students with a minimum of 75% of work performed using information technology

² – in persons

- Ratio – average time spent for studies starting from entrance to defence (including an academic leave) / the standard period of study (as a rule, during the previous three years)

Bachelor's study, study on the basis of integrated curricula and professional higher education study

(State-commissioned and non-state-commissioned students, unless mentioned otherwise)

- The lowest entrance points of state-commissioned students in five popular specialty and in five unpopular specialty in a given year, percentage of potential maximum
- First year student drop-out rate³
- Ratio – average time spent for studies starting from entrance to graduation (including an academic leave) / the standard period of study (bachelor's, integrated and professional higher education study separately)
- The existence of the academic counselling system

Academic publications. Technical solutions and creative activities.

- Number of academic publications per member of the teaching and research staff responsible for research (in fulltime positions) in a given period. Separately are given the following numbers:
 - all academic publications
 - CC publications
 - patents, implemented projects and product samples equal to academic publications
 - public presentations of the results of creative activities
 - published monographs, textbooks, study aids on different carriers, etc.

(see examples from legislation established by universities about the procedure for record keeping of academic publications in Annex ...)

In-service training. Open university.

- Number of students in a given period
- Number of attended curricula in a given period
- The extent of activity expressed financially in a given period, in thousands of EEK.

³ Data are submitted 1) for a given academic year as of the 1st of October in the next academic year; 2) separately for bachelor's, integrated and professional higher education study