



# Implementing U-Map in Estonia

2011 Case Study Report

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## Introduction

The Estonian higher education system is a small system (around 69.000students), comprising 6 public universities, 3 private universities and 24 institutions of applied higher education. The larger institutions have branch campuses in different parts of the country. The institutions differ widely in size (from 50 to 18,000students) and scope of activities and disciplines. This is reflected in the U-Map activity profiles.

## The implementation process

The recruitment of institutions was organised in close cooperation with the Estonian Ministry of education (department of higher education). All 33 accredited higher education institutions in Estonia were invited to participate in the U-Map Lifelong Learning project.

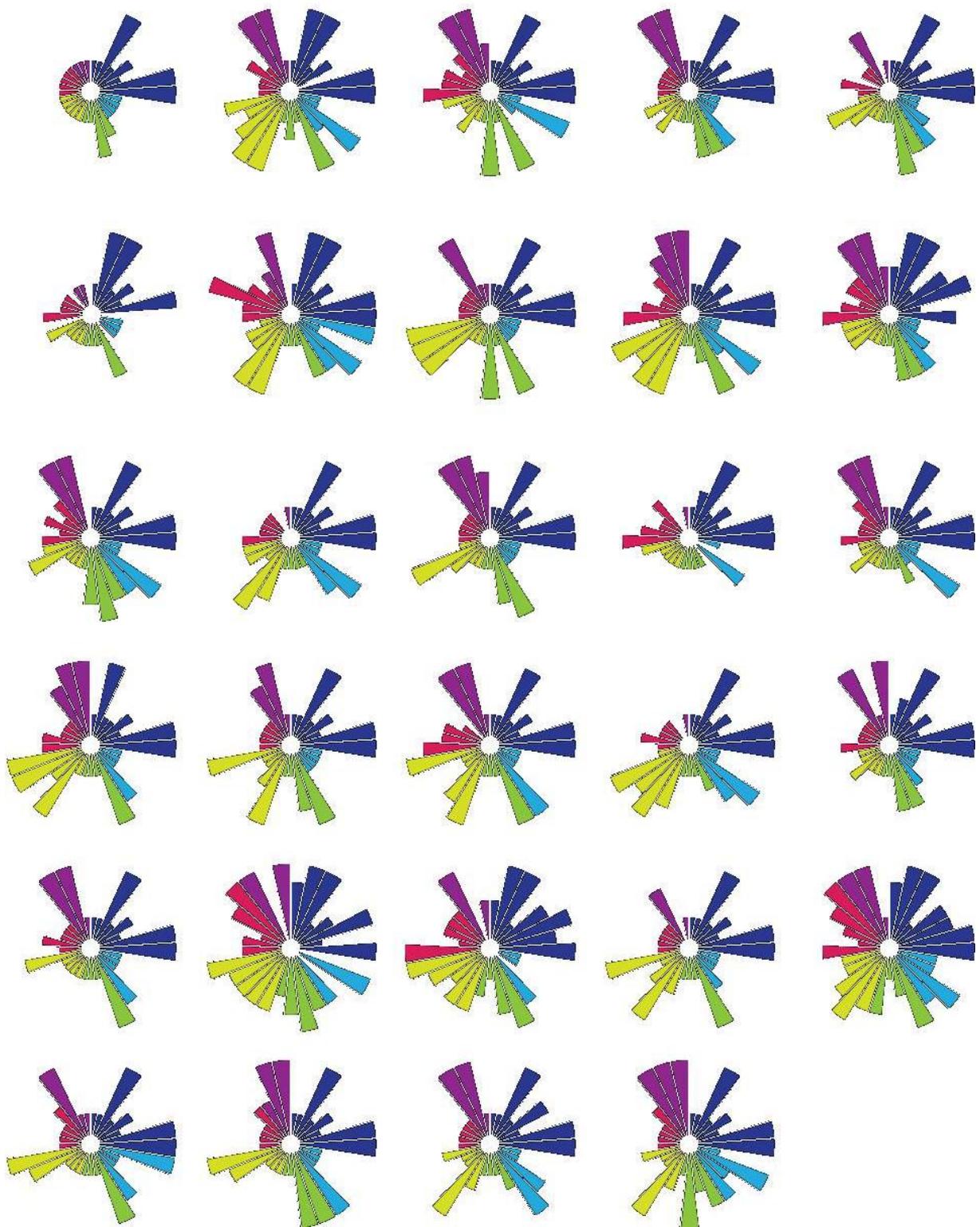
Representatives from the Estonian higher education institutions and potential other data providers joined in to discuss procedures regarding prefilling and the data provision by the institutions. Based on those discussions data were extracted from national existing data sources (EHIS) and used to prefill parts of the institutional questionnaires (see appendix A for the definitions and sources of prefilling).

After the prefilling, a technical workshop was organised with the participating higher education institutions (see appendix B for short report). Issues regarding the definitions of indicators and data-elements and practical issues regarding the questionnaire were discussed. Based on these discussion the decision was made to change the reference year (from 2008 to 2009), as well as further clarification could be given regarding the definition and use of region and temporary staff data. Data collection using the on-line questionnaires was concluded four months after the technical workshop and the verification process took another month. During this period, the U-Map team was in close contact with the participating Estonian institutions via the project website, the helpdesk and via mail correspondence. In the verification process, the data submitted by the institutions was verified by the U-Map team. Outliners, unexpected results and inconsistencies were reported back to and discussed with the institutional contact person. Once the (re)submitted data were approved, the U-Map team created the activity profiles of the higher education institutions.

At the end of the project, 28 higher education institutions provided data and U-Map profiles were generated (see appendix C for a list of participating higher education institutions in Estonia). The results were presented in an interactive dissemination seminar organised in Tartu, Estonia.

## Results

Below, the anonymised U-Map activity profiles of the 28 Estonian higher education institutions are presented. Currently the results of U-Map are visible only to the institutions that have submitted data and confirmed their activity profiles. The U-Map data-base is currently organised in such a way that the Estonian institutions can only view the profiles of other participating institutions in Estonia. Our target is that U-Map will enter the public domain once the total number of participating institutions is sufficient to establish stable and robust cut-off points. This is foreseen for summer 2012. The Estonian U-Map profiles are discussed below in relation to the national policy context. This reflects the discussion that took place in interaction with the institutions and stakeholders during the U-Map dissemination seminar in Estonia.



## Reflection on the activity profiles within the Estonian higher education policy context

The Estonian government is rethinking the higher education system. In 2005 a higher education strategy was outlined for the period 2006-2015 (Estonian Ministry of Education and Research, 2005). Internationalisation of higher education, increasing participation, especially in science and technology, increasing the production of doctoral graduates, realigning the higher education system to become more compatible with the European systems, reform of the quality assurance system and more attention to the social dimension of higher education were the main objectives in that strategy (Estonian Ministry of Education and Research, 2010). Currently (2011) a higher education reform plan is drafted. The aim of that plan is to increase the fairness of the higher education system for students, enhance the efficiency of the system and increase the autonomy and accountability of higher education institutions (see also Estonian Ministry of Education and Research, 2011).

The international economic hardship and the national demographic situation (an upcoming drop in secondary school leavers) are major challenges for realising the plans.

Progress is made regarding the legislative frameworks facilitating reform, but the limits on state funding have kept the system from making progress in terms of participation and doctorate production (student support systems and scholarship programs could not be implemented). Important changes have started regarding the institutional landscape and further changes are planned. A few vocational educational institutions have transformed into institutions of professional higher education and more institutions are to follow. This transformation of the non-university sector is seen as an important way to upgrade participation and quality of education in that sector. There are plans to change the strong central steering of higher education institutions. According to the draft reform plans, the concept of state commissioned education will be abolished and institutions will have to decide how many students places will be created, based on their profile and function. Profile and mission oriented performance contracts between the ministry and individual institutions are envisaged as major instruments for steering the system. As for the internationalisation objectives there are ambivalent results. Estonian students are internationally mobile, Erasmus mobility is well balanced, but there are far more students leaving the country for studying abroad than students coming in.

The dynamic character of higher education in Estonia became apparent in the discussions regarding the reference year. There was a strong feeling among the institutions that the reference year should be as recent as possible, since things changed very rapidly in the Estonian higher education landscape. The fact that there was an intense discussion on staff and how to count staff on short and part time contracts can be related to a particular characteristic of the higher education system: the large number of small institutions.

The resulting U-Map profiles are to a large extent in line with the expectations of the Estonian institutions and the Ministry. The fact that there are five or six larger institutions with significant research involvement and a large number of small highly specialised institutions did not surprise the Estonian audience. The strong regional engagement in most institutions was also not seen as a surprise as Estonia is considered to be one NUTS2 region and most of the larger institutions have

branch campuses across the country. Most interesting differences/ diversity could be found in the 'international orientation' dimension and the dimension 'knowledge transfer'.

Estonian institutions have started comparing their profiles and questions regarding the various scores have emerged. These questions will be used in a next stage to improve the interpretation of the definitions and the consistency of data provision across the Estonian institutions. It became also clear that some of the small institutions with a 'small' profile were already in some way under scrutiny. The doubts regarding their viability were expressed before the profiles were created. This touches upon a crucial point of the use of U-Map. U-Map is an instrument that describes the activity profiles of an institution. If that activity profile is 'small' it does not mean that the performance of that institution is low. It may hint at viability issues but that needs to be firmly embedded in the institutional and national context. U-Map may give a signal, but most certainly not the only signal.

The results as presented allow for multiple interpretation when it comes down to *classifying* higher education institutions. The dissemination seminar illustrated that different user-perspectives result in different user-defined selection criteria and, as a result, in different classifications. This highlights that as a multi-dimensional higher education profiling tool, U-Map provides a series of lenses through which important similarities and differences between higher education institutions can be described and compared. The user-drivenness of the instrument allows different stakeholders to compare institutions according to their own priorities. The online profile finder assists users to compare and analyse institutional activity profiles by identifying specific subsets of institutions from the entire set of institutions included in the U-Map database.

## Conclusion

U-Map is designed as a European transparency instrument. National, Estonian, higher education issues may be addressed in the analyses of the profiles, but it is clear that U-Map as a European tool is not fully aligned with all national institutional needs. The implementation of U-Map in a national higher education system - such as the one in Estonia but also of Portugal within the framework of the Lifelong Learning program- has raised the awareness of the higher education institutions of their own profile. Although some of the larger institutions already had that awareness, a large number of institutions used the U-Map exercise as an opportunity to start or intensify internal discussions on their institutional profile and to compare their profile to that of other institutions. In addition, the project contributed to the national discussions on the use and international compatibility of particular indicators and their definitions. This was the case not only for some already existing indicators, but also with respect to indicators that are not (or not yet) part of the national standard set of indicators. These discussions may eventually lead to a more consistent and robust set of data and indicators.

The implementation of U-Map so far, up and including Estonia as one of the national cases within the European Commission's Lifelong learning project has shown that a national approach is a most promising approach. The availability of national databases and frameworks allow for a more in-depth analysis of those existing data structures and for a better alignment of definitions and data both nationally and internationally. It also provides a better base for verification of the data. U-Map has proven to be a viable transparency instrument, that will improve the more institutions and national systems participate. The Estonian case in particular illustrates that U-Map is also well suited for –

from a European perspective – relatively specialised and smaller higher education institutions. Their particularities and how they reflect in the U-Map institutional activity profiles provide input for the further development of the instrument. This will further improve the relevance of the European classification: U-Map.

At the end of this project, U-Map has not yet lifted the veil that limits a clear view on the institutional diversity in the European higher education landscape. The results of the first implementation initiatives however show that U-Map can make a significant contribution. Using an agreed set of indicators, definitions and well-tested user oriented instruments, U-Map proved that it is possible to generate institutional activity profiles that cover a broad scope of activities undertaken by (potentially) all types of higher education institutions and convey that message ‘at a glance’. Although it is still too early to make strong claims regarding comparisons within the European higher education area, it is clear that U-Map may provide solid building blocks for enabling just that.

## References

Estonian Ministry of Education and Science (2010), *Summary of developments of Estonian higher education policy from 2006 to 2009, Overview of the activities that have taken place based on the 2008–2010 implementation plan for the Estonian Higher Education Strategy 2006–2015*, Tartu

Estonian Ministry of Education and Science (2005), *Estonian Higher Education Strategy, 2006–2015*, <http://planipolis.iiep.unesco.org/upload/Estonia/Estonia-Higher-Education-Strategy-2006-2015.pdf>

Estonian Ministry of Education and Science (2011), *The Five Challenges of Estonian Education, Estonian Education Strategy 2012–2020, draft*, [http://www.elu5x.ee/public/Haridusstrateegia\\_ENG\\_spreads\\_appendix.pdf](http://www.elu5x.ee/public/Haridusstrateegia_ENG_spreads_appendix.pdf)

## Annex A – Sources and definitions for prefilling in Estonia

### Estonian U-Map data for prefilling 2009 – definitions

Some of the questions in the institutional questionnaire in Estonia have already been answered 'pre-filled' by us, using data provided to us by the Estonian Ministry for education and research. This data originates from national Estonian databases (mostly EHIS). Below you will find the definitions used as well as the source used.

- City of institution – city that is stated in legal address. Source: Estonian Education Information System (EHIS).
- Country of institution – country that is stated in legal address. Source: EHIS.
- What is the legal status of your institution? – type of institution in Estonian language. Source: EHIS.
- How would you characterise your institution? – form of ownership. Source: EHIS.
- Total number of students enrolled – number of tertiary students who were enrolled in tertiary programs on 10th November 2009. Source: EHIS.
- Number of doctoral students - number of doctoral students who were enrolled in doctoral programs on 10th November 2009. Source: EHIS.
- Part time students - students taking a course load or educational program that requires less than 75 % of a full-time commitment of time and resources. Source: EHIS.
- Students aged 30 years or older – students who were 30 years old or older on 1st of September 2009. Source: EHIS.
- Degree seeking students with a foreign qualifying diploma - students who have presented a foreign diploma when enrolling in a tertiary program. Source: EHIS.
- Degree seeking students with a foreign nationality - students whose citizenship is not Estonian. Source: EHIS.
- Graduates 2000/10 – tertiary graduates who graduated during period 01.10.2009 – 30.09.2010. Professional higher education graduates are counted under “Bachelor degrees awarded” category.
  - Graduates Bachelor degrees awarded – this includes the pre-Bologna degrees awarded upon completion of a bachelor study programme entered in the Estonian Education Information System before 1 June 2002 with the nominal length of study of at least four years.
  - Graduates Master degrees awarded – this includes the degrees awarded upon completion of a master study programme entered in the Estonian Education Information System before 1 June 2002.
- Subject areas for graduates – ISCED 97. Source: EHIS.

## Annex B – Report of the Technical Workshop

On 21 March 2011 the technical workshop U-Map LLL Estonia was held at the Ministry of Education and research, Tartu. Around 40 people from 29 HEIs and other stakeholders participated. After an introduction by Mart Laidmets, head of the department of higher education, the U-Map team (Marike Faber and Frans Kaiser) introduced U-Map and the U-Map LLL Estonia project to the audience. The remainder of the programme was dedicated to a detailed introduction to the on-line questionnaire and the help-desk.

### Help desk

The help desk consists of a FAQ section on the website and the e-mail ([info@u-map.eu](mailto:info@u-map.eu)) and phone hotlines to the U-Map team.

The FAQ section provides the user the opportunity to pose questions regarding the questionnaire and how to answer the questions. It allows the user also to read the answers provided by the U-Map team to frequently asked questions and react to these answers. The latter is possible only for users who are logged in (using the access codes proved for access to the questionnaire).

### The questionnaire

The on-line questionnaire was demonstrated in detail section by section. The issues that were raised during this demonstration are described below.

### General remarks

A number of institutions express their concern regarding the default year of reference (2008). They argue that the situation in Estonian higher education has changed significantly in 2009. Many HEIs developed their activities in the area of international orientation in 2008-2009. If U-Map uses 2008 data, this would not be reflected and Estonian HEIs would not be characterized properly.

EHIS does not comprise data on staff for 2008 but from 2009 onwards, staff data are available through EHIS.

HEIs indicate that they have information on staff for both 2008 and 2009.

If 2008 is a 'atypical' year (which is to be discussed with the U-Map team) an exemption from the reference year may be made.

To accommodate the interest to present latest data available the U-Map team will consider the option of presenting an additional latest U-Map profile as background information. The U-Map profile of the default year of reference will then be used in the finder and viewer. Whether this option can be implemented on a short term is questionable.

The frequency of updating information is not decided upon yet. However, it is clear that there will not be an annual or bi-annual update.

The data submission procedure was explained to the audience in detail. This information can be found also in the U-Map protocol ([http://www.u-map.org/U-Map\\_protocol.doc](http://www.u-map.org/U-Map_protocol.doc))

## General information

It was stressed that the name that will be used in U-Map needs to be checked by the HEIs. There were no further remarks.

## Students

There was a suggestion to change the date for counting student related information on 1 October instead of 10 November as used when pre-filling. The reason for this is that this date is more in line with the international data delivery procedures. A counterargument was made: there are a lot of students that enroll during October. Using 10 November will capture these students. It was decided to keep 10 November as the reference date.

It was stressed that data on international exchange students should refer to students who participate in a recognized, subsidized programme or exchange agreement. Whether such programmes/agreements are bi-lateral or multilateral does not matter.

The definition of region is problematic in Estonia. According to NUTS Estonia is only one region. A more detailed regional divide exists, distinguishing between North and South. This distinction does not help as the larger institutions have campuses across the country. The institutions do have information on the county (there are 15) the new entrants come from. This information may be of use to the HEIs. The U-Map team will confer with the Ministry to see whether this information could be used. We decided to continue the discussion on the region-issue after the workshop and communicate the outcome of the discussion (what region to use) within two weeks after the workshop.

## Graduates

There are a number of degree types that have been combined in prefilling. Pre-Bologna and post-Bologna bachelor degrees are different but they refer to the same degree level (both give access to the master programmes). Because of this, the degrees awarded in these two types of programmes were combined. The participants agreed with that decision. A similar approach was used regarding pre-Bologna and post-Bologna master degrees and university bachelor and professional higher education degrees: they are different but at a similar degree level.

The region-issue was also discussed in the context of the graduates (where they work). It was indicated that there is no information on the level of the county. For this indicator there is only one region: Estonia.

## Staff

There is a question raised regarding short term contracts and how to count staff on such contracts. A number of HEIs hire (foreign) staff on limited and short term contracts. For smaller and private institutions this is a significant part of their teaching capacity. If academic staff is counted on 31-12-2008 it may be that part of those short term contract staff is not included. It was decided that the U-Map team will look into the staff data available (2009 data) to assess the impact of the preferred method (counting on 31-12) in terms of missing short term contracts. The HEIs will be informed on the decision how to deal with this problem within two weeks after the workshop.

Number of doctoral students counted as staff should be zero in all cases. Doctoral students who have a contract as regular academic staff in addition to their registration as a doctoral student can be counted with the staff numbers.

### Income

There was one HEI that used a different reference year in its financial statement (academic year instead of calendar year). As the information requested is used in relative terms (% of income from various sources) and not in absolute terms and given the significant workload changing the reference year would imply, it is decided to allow a different reference period for this institution. Reference period used should be specified in comments.

### Expenditure

If the second option regarding the ownership of buildings is chosen (mainly owned by the institution) the HEI may specify the percentage of expenditure on housing is used for renting buildings.

### Research and 3<sup>rd</sup> mission

The information regarding publications is not prefilled. Since there is a Estonian classification of (research)publications (ETIS) that is generally used by the HEIs it was decided that the U-Map team, in co-operation with the ministry, rector's conference and HEIs will provide a conversion table (what categories of the ETIS classifications can be related to one of the three categories used in the questionnaire?). This table will be sent to the contact persons as soon as possible - see below:

#### Conversion table ETIS publication categories => U-Map publication categories

##### *Classification of publications in Estonian Research Information System*

1	<b>1. Articles in journals</b>	U-Map category
1.1	Articles indexed by Thomson Reuters Web of Science and/or published in journals indexed by ERIH (European Reference Index of the Humanities) categories A and B;	A
1.2	Peer-reviewed articles in other international research journals with an ISSN code and international editorial board, which are circulated internationally and open to international contributions; articles of ERIH category C;	A
1.3	Articles in Estonian and other peer-reviewed research journals with a local editorial board; scientific articles in journals important for Estonian culture Akadeemia, Looming, Vikerkaar.	A
2	<b>A book/monograph</b>	
2.1	Peer-reviewed research monographs published by international publishers listed in Annex;	A

2.2	Monographs published by publishers not listed in Annex;	A
2.3	Dissertations published in a series of dissertations (excluding manuscripts).	A
<b>3</b>	<b>Articles in proceedings/a chapter in a book or in a collection</b>	
3.1	Articles/chapters in books published by the publishers listed in Annex (including collections indexed by the Thomson Reuters ISI Proceedings);	A
3.2	Articles/chapters in books published by the publishers not listed in Annex;	A
3.3	Specific research publications (dictionaries, lexicons, sets of maps, (field) guides, text-critical publications);	B
3.4	Articles/presentations published in conference proceedings not listed in Section 3.1;	B
3.5	Articles/presentations published in local conference proceedings.	B
<b>4</b>	<b>Editing scientific publications</b>	
4.1	Editing collections or special issues of research journals corresponding to the requirements set in sections 1.1, 1.2, 3.1, 3.2;	D
4.1	Editing of other research publications that are published by academic publishers.	D
<b>5</b>	<b>Published meeting abstracts</b>	
5.1	Conference abstracts indexed by Thomson Reuters Web of Science;	D
5.2	Conference abstracts that do not belong to section 5.1.	D
<b>6</b>	<b>Other publications</b>	
6.1	Full articles in encyclopedias;	B
6.2	Text books and other study materials;	B
6.3	Popular science articles;	C
6.4	Popular science books;	C
6.5	Essays accompanying books of fiction;	C
6.6	Articles in other journals and newspapers;	D
6.7	Other creative activities.	D
<b>A</b>	<b>peer reviewed academic publications</b>	
<b>B</b>	<b>professional publication</b>	
<b>C</b>	<b>other research outputs</b>	

Source: ETIS; <https://www.etis.ee/otsingud/classification.aspx>

## Annex C - List of participating higher education institutions in Estonia

### Institutions offering higher education programmes in Estonia 25.01.2011

Source: Ministry of Education and Research

Name in Estonian	Name in English	Homepages:
<b>Public universities:</b>		
Eesti Kunstiakadeemia	Estonian Academy of Arts	<a href="http://www.artun.ee">http://www.artun.ee</a>
Eesti Muusika- ja Teatriakadeemia	Estonian Academy of Music and Theatre	<a href="http://www.ema.edu.ee">http://www.ema.edu.ee</a>
Eesti Maaülikool	Estonian University of Life Sciences	<a href="http://www.emu.ee">http://www.emu.ee</a>
Tallinna Tehnikaülikool	Tallinn University of Technology	<a href="http://www.ttu.ee">http://www.ttu.ee</a>
Tallinna Ülikool	Tallinn University	<a href="http://www.tlu.ee">http://www.tlu.ee</a>
Tartu Ülikool	University of Tartu	<a href="http://www.ut.ee/">http://www.ut.ee/</a>
<b>Private universities:</b>		
Estonian Business School	Estonian Business School	<a href="http://www.ebs.ee">http://www.ebs.ee</a>
Euroakadeemia	University Euroacademy, Tallinn	<a href="http://www.eurouniv.ee">http://www.eurouniv.ee</a>
EELK Usuteaduse Instituut	Institute of Theology of the Estonian Evangelical Lutheran Church	<a href="http://www.eelk.ee/ui">http://www.eelk.ee/ui</a>
<b>State professional higher schools:</b>		
Eesti Lennuakadeemia	Estonian Aviation Academy	<a href="http://www.tac.ee">http://www.tac.ee</a>
Eesti Mereakadeemia	Estonian Maritime Academy	<a href="http://www.emara.ee">http://www.emara.ee</a>
Kaitseväe Ühendatud Õppeasutused	Estonian National Defence College	<a href="http://www.ksk.edu.ee">http://www.ksk.edu.ee</a>
Lääne-Viru Rakenduskõrgkool	Lääne-Viru College	<a href="http://www.lvrkk.ee/">http://www.lvrkk.ee/</a>
Sisekaitseakadeemia	Estonian Academy of Security Sciences	<a href="http://www.sisekaitse.ee">http://www.sisekaitse.ee</a>
Tartu Kõrgem Kunstikool	Tartu Art College	<a href="http://www.art.tartu.ee">http://www.art.tartu.ee</a>
Tallinna Pedagoogiline Seminar	Tallinn Pedagogical College	<a href="http://www.tps.edu.ee">http://www.tps.edu.ee</a>
Tartu Tervishoiu Kõrgkool	Tartu Health Care College	<a href="http://www.nooruse.ee">http://www.nooruse.ee</a>
Tallinna Tervishoiu Kõrgkool	Tallinn Health Care College	<a href="http://www.ttk.ee">http://www.ttk.ee</a>
<b>State vocational education institutions:</b>		
Võrumaa Kutsehariduskeskus	Võro County Vocational Training Centre	<a href="http://www.vkhk.ee">http://www.vkhk.ee</a>
<b>Private professional higher schools:</b>		
Arvutikolledž	Computer Science College	<a href="http://www.iati.ee">http://www.iati.ee</a>
Eesti Ettevõtluskõrgkool Mainor	Estonian Entrepreneurship University of Applied Sciences	<a href="http://www.mk.ee">http://www.mk.ee</a>
Eesti Hotelli- ja Turismikõrgkool	Estonian School of Hotel and Tourism Management	<a href="http://www.ehte.ee">http://www.ehte.ee</a>
Eesti Infotehnoloogia Kolledž	Estonian Information Technology College	<a href="http://www.itcollege.ee/">http://www.itcollege.ee/</a>
Eesti EKB Liit Kõrgem Usuteaduslik Seminar	Tartu Theological Seminary	<a href="http://www.kus.tartu.ee">http://www.kus.tartu.ee</a>
Eesti Metodisti Kiriku Teoloogiline Seminar	Baltic Methodist Theological Seminary	<a href="http://www.emkts.ee">http://www.emkts.ee</a>
Kõrgkool "I Studium"	Higher School "I Studium"	<a href="http://www.istudium.ee">http://www.istudium.ee</a>
Majanduse ja Juhtimise Instituut	Institute of Economics and Management	<a href="http://www.ecomen.eu">http://www.ecomen.eu</a>
Tartu Teoloogia Akadeemia	Tartu Academy of Theology	<a href="http://www.teoloogia.ee">http://www.teoloogia.ee</a>