THE ESTONIAN INFORMATION TECHNOLOGY COLLEGE

INSTITUTIONAL ACCREDITATION

SELF-EVALUATION REPORT

Tallinn 2013
PART I

1. Explanation of Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>EITF</td>
<td>Estonian Information Technology Foundation, the owner of the EITC</td>
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<td>ESF</td>
<td>European Social Fund</td>
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<td>ITL</td>
<td>Estonian Association of Information Technology and Telecommunications</td>
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<td>ICT</td>
<td>Information and communications technology</td>
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<td>MER</td>
<td>Estonian Ministry of Education and Research</td>
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<tr>
<td>Pro forma method</td>
<td>A method of self-evaluation, where the implementation of activities is analysed on the basis of a specific form, and areas for improvement are identified</td>
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<td>RIA</td>
<td>Estonian Information System’s Authority</td>
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<td>ACM</td>
<td>Association for Computing Machinery</td>
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<tr>
<td>The Primus</td>
<td><strong>Primus</strong> is a programme for the period 2008–14 funded by the European structural funds established to enhance teaching quality at higher education institutions and improve the competitiveness of their graduates.</td>
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<tr>
<td>DoRa</td>
<td><strong>Doctoral Studies and Internationalisation Programme</strong> for the period 2008–2015 funded by the European Social fund.</td>
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<tr>
<td>The Tiger University</td>
<td>A support <strong>programme</strong> for higher education in the field of ICT</td>
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<td>Grundtvig</td>
<td>A sub-programme of the European Commission's <strong>Lifelong Learning Programme</strong> aimed at adult education.</td>
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<tr>
<td>Erasmus</td>
<td>A <strong>sub-programme</strong> of the European Commission’s Lifelong Learning Programme aimed at higher education.</td>
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<td>SIS</td>
<td><strong>Study Information System</strong> of professional higher education institutions.</td>
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<td>PIM</td>
<td>An intensive programme entitled &quot;Promoting Intercultural Management in Working Life in the Baltic Sea Region&quot;</td>
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<td>WISDOM</td>
<td>An intensive programme entitled &quot;Web Information System Data Organisation Modelling&quot;</td>
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<tr>
<td>IC-SID</td>
<td>An intensive programme entitled &quot;Intercultural Approaches to Service Innovation &amp; Design Methods&quot;</td>
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<tr>
<td>DITS</td>
<td>An Intensive Programme entitled &quot;Deploying IT Infrastructure Solutions&quot;</td>
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<tr>
<td>SAIS</td>
<td><strong>Admissions Information System</strong> for Estonian citizens applying to Estonian institutions of higher education or of vocational education and training.</td>
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<tr>
<td>RCUA</td>
<td>Estonian Rectors’ Conference of Universities of Applied Sciences</td>
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<tr>
<td>UT</td>
<td>University of Tartu</td>
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<td>TU</td>
<td>Tallinn University</td>
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<td>TUT</td>
<td>Tallinn University of Technology</td>
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<tr>
<td>EMA</td>
<td>Estonian Maritime Academy</td>
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<tr>
<td>TTK UAS</td>
<td>TTK University of Applied Sciences</td>
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<tr>
<td>EUAS</td>
<td>Estonian Entrepreneurship University of Applied Sciences</td>
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<td>EAVA</td>
<td>Estonian Aviation Academy</td>
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2. The Estonian Information Technology College: Introduction

2.1. Facts at a Glance

<table>
<thead>
<tr>
<th>Name</th>
<th>The Estonian Information Technology College, EITC (Eesti Infotehnoloogia Kolledž, EIK) (hereinafter also referred to as 'College') <a href="http://www.itcollege.ee/en/">http://www.itcollege.ee/en/</a></th>
</tr>
</thead>
<tbody>
<tr>
<td>Address</td>
<td>Raja 4C Tallinn 12616 Tel: +(372) 628 5800; Fax: +(372) 628 5801</td>
</tr>
<tr>
<td>Legal status</td>
<td>A private institution of professional higher education. It is operated by the Estonian Information Technology Foundation (EITF) <a href="http://www.eitsa.ee/en/">http://www.eitsa.ee/en/</a>, which was founded in 2000 with the aim of establishing a higher education institution to provide IT education at the professional higher education level, and to contribute to the preparation of IT professionals with higher education that meets contemporary requirements</td>
</tr>
<tr>
<td>Founders of the EITF</td>
<td>The founders of the EITF are: the Republic of Estonia (represented by the Ministry of Education and Research), the University of Tartu, Tallinn University of Technology, AS Eesti Telekom, and the Estonian Association of Information Technology and Telecommunications (ITL)</td>
</tr>
<tr>
<td>Key facts</td>
<td>17.05.2000 The first education licence was issued 23.04.2003 A decision was made by the Higher Education Quality Assessment Council to accredit the College's study programmes 21.08.2010 The right to conduct studies for an unspecified term in the Informatics and Information Technology study programme group was issued in accordance with Annex 3 to the Government of the Republic Regulation Standard of Higher Education</td>
</tr>
</tbody>
</table>
| Curricula | • IT Systems Development (Code 2957 in the Estonian Education Information System, abbreviated as EHIS; student workload is 180 ECTS credits);  
• IT Systems Administration (Code 2958 in EHIS; student workload is 180 ECTS credits)  
• Information Systems Analysis (Code 3105 in EHIS; student workload is 180 ECTS credits);  
• Technical Communication (Code 3312 in EHIS; student workload is 180 ECTS credits) — admissions to the curriculum occurred in 2004 through 2011 |
| Basic financial data | Revenues in 2011 and 2012 were c. € 1.8 million per year, tuition fees forming c. 83% of total revenues |
| School building | In use since 2008. Useful area is 3751 m², including 2923 m² of useful area of classrooms. There are 7 lecture halls, 4 laboratories and 4 computer rooms |
| Number of students as of 10.11.2012 | 882 students (including 123 students on academic leave); 62 external students; 6 visiting students. |
Number of alumni as of 10.11.2012 | 571
---|---
Number of employees as of 10.11.2012 | The EITC academic and support staffs — 31 employees
Contact person | Merle Varendi
Quality Manager
e-mail: merle.varendi@itcollege.ee
tel. +372 628 5812

2.2.  History of the College

The idea of a College was born during the Teleakadeemia seminar organized by Sonera OY and AS Eesti Telekom in Tallinn in the summer of 1999. The University of Tartu and Tallinn University of Technology introduced that idea to the Minister of Education who convened a task force in September 1999 to launch the College. On 29 December 1999, the founders of the Estonian Information Technology Foundation — the Ministry of Education, the University of Tartu, Tallinn University of Technology, AS Eesti Telekom and NPO Estonian Computer Association — signed an agreement to establish the College.

To administer the College, the Estonian Information Technology Foundation (EITF) was founded on 29 March 2000. The first education licence was issued to the College on 17 May 2000. The College became the first higher education institution in Estonia to provide applied, professionally oriented programmes in the field of computer sciences. In 2000, 141 students were enrolled in the single IT Systems Curriculum specializing either in administration or development; today the number of students is over 900, participating in four curricula.

2001 — On 9 November the College became the first regional Cisco Networking Academy in Estonia.

2002 — The fields of administration and development were split into two separate curricula and the initial IT Systems Curriculum was closed.

2003 — The College curricula were accredited on 23 April, and the first class graduated from the College on 17 June. A new curriculum, Information Systems Analysis, was added, and the College was accepted to the Microsoft IT Academy Programme. In 2003 the Ministry of Education and Research (MER) and the College agreed on 75 state-funded student places. By the 2012/13 academic year, this number had already increased to 125.

2004 — The Technical Communication Curriculum was added.

2005 — On 26 January, members of the Estonian Rectors’ Conference of Universities of Applied Sciences set priorities for quality-related joint activities and signed a joint declaration.

2008 — The new school building at Mustamäe was completed, and it was recognized by the Estonian Association of Information Technology and Telecommunications as the deed of the year — Aasta Tegu 2007.

2010 — A joint conference of professional higher education institutions was held to celebrate the 10th anniversary of the College and discuss with employers, possible future trends in cooperation and the education system.

2011 — On 2 April the mobile/wireless software development lab was opened at the College, and in the same year, being first in the region to do so, the College became an LPI (Linux Professional Institute) Approved Academic Partner to provide Linux training in accordance with the LPI certification programme.

2.3.  The College’s Strategy and Competitive Advantages

The College’s mission is to provide the best applied IT education in the region, combining high-tech know-how and the practical needs of the information society.
The College's vision for 2020 is to be a provider of professional higher education and in-service training in the field of information and communications technology (ICT), and a conductor of applied research to support instruction, which also meets the requirements of an information society and has an international reputation.

To ensure its sustainable development and to follow its mission and vision, the College has set the following key goals in its development plan:

1. Internationalization, and cooperation with Estonian and foreign higher education institutions in the field of ICT education;
2. Cooperation with ICT-related enterprises, the public sector, and their associations;
3. State-of-the-art tangible resources;
4. An optimal size for the student body;
5. Motivated, professional membership (academic and support staffs, as well as students) and quality-oriented organizational culture.

The College's competitive advantages are:

- compactness and focus on only one field of study;
- horizontal social networking and good contacts with employers, including them in development activities;
- minimal bureaucracy, a large proportion of non-formal communication, and student inclusion in the College's management and development processes;
- modern infrastructure (including remote laboratories) and broad range of development platforms (Microsoft Windows/Linux/Apple MacOS X);
- capability to provide education in English;
- strong academic staff, and the inclusion of the best practitioners in educational and development activities;
- multiple forms of study.

2.4. Management of the College, and Staff

The owner of the College is the EITF which also curates the Estonian e-Learning Development Centre (supporting and developing activities regarding e-learning in higher education and vocational education), administers the IT Academy, ICT programs, and the Tiger University — an ICT-related support programme addressed to universities. The EITF coordinates the development and administration of the Admissions Information System of Estonian educational institutions (SAIS) and the Study Information System of professional higher education institutions (SIS). The EITF Management Board consists of four members including the rector of the College. The management of the College includes the rector and the vice-rector (Statutes); the staff of the College are divided into:

- academic staff — 12 ordinary members, c. 50 visiting members from other higher education institutions each academic year, and practitioners from the ICT sector
- administrative staff — rector, employees of the Office of Academic Affairs, quality manager, educational technologist, continuing education program manager, project managers and the support structure of the EITF which provides services to the entire organization

Due to the close interconnection within EITF fields of activity, a process-based management is characteristic of the functioning of the organization, i.e. a common support structure supports the development of key activities in both the College and other sub-units. The College’s structural scheme is provided for in its development plan and Figure 1.1 gives an overview of key processes.
The College management is based on the principles of openness and flexibility, valuing a practical output of educational activities and the contribution by employer representatives to training IT specialists. One of the basic endeavours of the College involves quality-oriented organizational culture which aims at focusing on the development of the most important processes. To continuously improve those processes, the College conducts different analyses (student and employee feedbacks, analyses of admissions, feedback from practical training facilities on students, etc.); and opinions received are taken into consideration for improving the processes and planning developments.

2.5. Areas of Activity and Partners of the College

The core activity of the College is to provide formal education in the field of computer science, and in 2012 the College market share in professional higher education was 50.8% (Part II Fig. 1.1). Taking into account studies in the first cycle of higher education provided by universities (bachelor degree studies), the College market share during the same period was 22.9%. In 2012, 50.8% of the students who started their studies in the field of computer science at a professional higher education level, were enrolled at the College.

In addition to formal education, the College is engaged in ICT-related in-service training and development activities, focusing on a specialist level.

**Partners from the education system:** The College cooperates closely with universities, professional higher education institutions and vocational training centres. The University of Tartu, Tallinn University of Technology and Tallinn University are its partners among universities. Partnerships with other professional higher education institutions work through the Estonian Rectors’ Conference of Universities of Applied Sciences, which organizes joint conferences, workshops and training trips to partner institutions of higher education.

Tallinn Polytechnic School, Haapsalu Vocational Training Centre and the Vocational Education Centre of Tartu are among vocational education and training institutions the College retains in close partnerships, as the graduates from those institutions often continue their studies at the College to obtain higher education. In 2012 they constituted 8.4% of the College students, and 6.5% of the College alumni have received a primary IT education at our partnership schools.

**Partners from the business sector:** As a result of successful cooperation with Estonian and international communications companies, the College boasts well equipped modern laboratories, e.g. a Cisco network technology laboratory where studies are conducted under Cisco Networking.
Academy programmes. In 2008 the Laboratory for Communications and Information Technology was established with support by Elion Eesti AS and Ericsson Eesti AS. In 2011 a mobile/wireless software development lab was added to develop software for iOS, Android and Windows Phone 7 platforms. Development of curricula is carried out in cooperation with business enterprises; additional resources are acquired through various projects (requirement 3.2.2 pages 49-50). The College actively cooperates with the Estonian Association of Information Technology and Telecommunications (ITL) which unites Estonian IT companies.

**Partners from the public sector:** The public sector involvement is predominantly based on cybersecurity-related collaboration with the Estonian Information System’s Authority (RIA) and the Computer Emergency Response Team of Estonia (CERT Estonia), to launch a study module for administration entitled *Practical Cybersecurity for IT Systems Administrators*. Since 2008 the College has had a close cooperating relationship with the City of Tallinn, primarily through a scholarship programme aimed at development activities.

**Partnerships at the international level:** In 2004 the College joined the Erasmus Programme — a sub-programme for higher education of the European Commission’s Lifelong Learning Programme (see page 44), and in 2010 the DoRa Programme, which supports international cooperation between higher education institutions and entrepreneurs, innovative trends in higher education, higher-education-related free movement in Europe, as well as improving comparability and compatibility of studies and qualifications in the European Union. Since 2009, in cooperation with its partners, the College has been participating in the development of Erasmus intensive courses (for example WISDOM, IC_SID – requirement 2.4.3 page 43). In 2013 the College leads an IP project entitled *Deploying IT Infrastructure Solution*.

### 2.6. Drafting the Self-Evaluation Report

The decision to participate in the process of institutional accreditation during the 2013 spring semester was adopted on 4 July 2011. Preparatory work for a self-evaluation report was carried out through quality projects in 2010–2012. In February 2012, the College held a briefing to introduce to its employees the principles for drafting the report, and formed a steering group to conduct self-evaluation. The steering team included the chairman of the EITF Management Board, rector of the College, vice rector, head of the Office of Academic Affairs, personnel manager, the continuing education program manager and quality manager. As a result of regular meetings twice a month, the steering group prepared a draft report which was discussed with College employees during a workshop held by the Estonian Higher Education Quality Agency on 21 May 2012. Based on the feedback received, the steering group continued to draft the report, and by October 2012 another version of the self-evaluation report was completed, which was then presented to the entire College staff for joint discussion on 1 November 2012. The composition of the steering group was then expanded, and as a result of weekly meetings of that group, the final version of the self-evaluation report was completed. The self-evaluation report was available to all employees for potential upgrades and improvements throughout the drafting process.
Part II

1. Organisational Management and Performance

1.1. General Management

<table>
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<tr>
<th>Requirement 1.1.1</th>
<th>A higher education institution has defined its role in the Estonian society</th>
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**Implementation** (policy) description

According to the *Estonian Higher Education Strategy*, the purpose of a higher education institution is to serve the interests of Estonian development and innovation including all key stakeholders (students, employees, alumni, employers, and society). The College acts in accordance with its mission — to provide the best applied IT education in the region, combining high-tech know-how and the practical needs of the information society — and guidelines by the Advisory Board and the EITF Council. The College's key role is to prepare IT specialists and provide labour market-oriented opportunities for lifelong learning. The College policy of focusing on providing professional higher education in computer science only agrees well with policies for an effective structure of the Estonian higher education — according to the EST.IT@2018, a study by the Estonian Development Fund, Estonia needs to increase its ICT labour supply while improving the quality of education in the field of ICT. Therefore, while increasing the admission numbers, the College also focuses on developing its facilities and cooperation with other enterprises.

**Evaluation**

The Advisory Board of the College and the EITF Council evaluate the College's activities at their meetings and outline plans for the future. Meetings with employers play an important role in planning development trends for the College (for example, in 2010 a round table meeting was held with representatives of companies and other higher education institutions; in June 2011 a discussion of development perspectives was held with employer representatives, and in December the same year a Partner Day was held to shape shared visions).

**Results**

![Figure 1.1. The College's market share in the field of computer science at the professional higher education level (student numbers) in 2012](image)

Source: *The Ministry of Education and Research. Statistics for educational institutions and learners*

1. In 2012 there were 1735 students enrolled in the field of computer science at the professional higher education level in Estonian higher education institutions, and the
College's role in preparing IT specialists comprised 50.8% of them (Figure 1.1). As bachelor degree studies are also considered to be studies of the first cycle of higher education, then the number of students enrolled in the field of computer science was 3852, which resulted in the College's market share being 23%.

2. The College has become an opinion leader in several issues related to its field, such as media discussions about the need for IT specialists (Tiit Roosmaa), e-government and e-services (Linnar Viik), cybersecurity (Margus Ernits), e-services and free software (Kaido Kikkas, Margus Ernits), Cisco technologies (Truls Ringkjob).

3. Society needs professionals with applied IT education, and 40.6% of specialists in computer science at the professional higher education level who entered the labour market in 2011 were graduates from the College (Figure 1.2).

Figure 1.2. The College's market share accounted for by young people with professional higher education entering the labour market in 2012

Source: The Ministry of Education and Research. Statistics for educational institutions and learners

<table>
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<tr>
<th>Requirement 1.1.2</th>
<th>The development plan and the related action plans of a higher education institution arise from the concrete purposes that are built on its mission, vision and core values</th>
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</table>

Implementation (policy) description
The current College development plan has been prepared for 2011–2014. Based on the College's mission, the primary focus is on providing education on a contemporary level (reflecting the latest technology), and on cooperating with others in the education and ICT sectors. Therefore, while preparing development plans and annual action plans, the College takes into consideration the results of various self-evaluations and discussions with its partners. To better tie in annual action plans with the objectives established in the development plan, the management has included employees and the Student Council in the drafting process. As a result of joint discussions, the College prepares action plans for the following academic year within the first quarter of each year.

Evaluation
In 2000 through 2009, development plans were prepared on a rolling basis (i.e. the plan was updated each year). Since 2010 the implementation of the development plan has been evaluated at the end of each year, and procedures related to the development plan have also been improved, including the transition from a rolling development plan to a fixed-term development plan. Rolling development plans helped to keep pace with rapid changes and adjust objectives in the phase of fast growth. Since over time the development plan began to look more like an action plan, it was decided to change the policies. SWOT analyses were conducted in both 2006 and 2008 to draft new
Self-evaluation conducted according to the pro forma method in 2010, which involved the College staff and students who discussed the strengths and areas for improvement of the College, provided an important improvement for the previous version of the College development plan.

**Results**

1. The development and action plans approved by the Council of the College and procedures for their review are in place. Action plans have been associated with practical management.
2. It has become a tradition to organize a thematic discussion of development trends with partners at least once a year, which has ensured that society's expectations have been taken into consideration.

<table>
<thead>
<tr>
<th>Requirement 1.1.3</th>
<th>Key results of a higher education institution have been defined</th>
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**Implementation (policy) description**

A table of aggregate indicators, defining the key results, has been part of the College development plan since 2010. Up to 2011, the objectives of a development plan were updated each November, and at the beginning of each calendar year the development plan for the following year was approved, incorporating the updates to the planned key results. However, several key results were analysed on the basis of both calendar and academic years, and to avoid duplication it was decided to base development plans on academic years as opposed to calendar years. At the end of the year the field managers evaluate the implementation of indicators identified in the development plan, and based on that evaluation, the action plans for the following academic year are detailed. Some key results (provision of state-commissioned education, dropout rates, etc.) are compared with those of other institutions of professional higher education, and although professional higher education institutions differ by their sizes and specifics, those comparisons still provide a good overview of the College's position in the landscape of professional higher education.

**Evaluation**

Expected key results are reviewed while drafting a development plan for a new period. In 2010 the key results were defined for the first time and in the next year, i.e. in 2011, the calculation method was updated and changes were made in the indicator list. For example, the indicator of the number of scholarship partners was left out, because the number of scholarships appeared to be more important; and an indicator characterizing modernization of laboratories was put into use in 2011.

**Results**

1. Since 2010 the College's key results (in the fields of educational activities, development activities, in-service training and staff) have been presented in Appendix 1 to the development plan and development plans for the next periods are prepared on the basis of those key results.
2. In 2012 the aggregate indicator of College employee satisfaction on a five-point scale was 3.7; satisfaction with leadership and with setting objectives was 3.5 and 3.8 respectively, similar to overall satisfaction (Figure 1.13).
3. The dropout rate of first-year students was 24.2% in the 2011–12 academic year, other professional higher education institutions providing technical specialties had a similar percentage of 22–28%. Overall dropout rate was 19.5% (Figure 2.7), being on the same level as in natural and exact sciences in general. Implementation of state-commissioned education was 91% in the 2011–12 academic year (Figure 2.1).
Requirement 1.1.4

The leadership of a higher education institution conducts the preparation and implementation of development and action plans and includes its members in this work

Implementation (policy) description

As outlined in the College development plan, the rector includes employees, and students through the Student Council, in management activities and also in drafting development plans. The first wider discussion was convened by the rector in 2009 to update the existing development plan in a joint brainstorming session which was followed by discussions regarding preparation of action plans. During subsequent years the rector included field managers in the drafting process, and before the approval of an updated development plan, joint discussions with the entire staff were held. The drafting process of a development plan has been changed several times: until 2009 the development plan was prepared for three years on a rolling basis, i.e. the development plan was adjusted each year and then adding one year. Starting from 2009, the period of the development plan was extended by one year and aggregate indicators, the so-called key indicators, were added to the development plan. In earlier years a calendar year was considered to be the period of the development plan, but in 2011 it was decided to base a development plan on the academic year and to end its updating on the rolling basis, i.e. starting from 2011 the implementation of the development plan is being monitored by a full four-year period (2011–2014).

Evaluation

Employee involvement is assessed by surveys conducted among employees and visiting members of the teaching staff. To assess student involvement, the annual questionnaire about the learning environment includes a question — which fields do students expect to be more involved in. The results of employee surveys are discussed at management meetings and the results of student surveys are analysed at College staff meetings.

Results

1. Figure 1.3 shows employee satisfaction with their involvement in the management. A decrease in satisfaction is probably caused by changes related to the resignation of the rector who had been in office for a lengthy period.

![Graph showing employee satisfaction from 2008 to 2012]

How employees’ opinions are valued
Management support to employees for achieving objectives
Importance of being involved in management activities

![Figure 1.3. Employee involvement in College development activities](Source: Employee satisfaction surveys)

2. Visiting members of the teaching staff are involved primarily in the process of curriculum development, and the survey results show their satisfaction with their involvement has been an average of 4.2 on a five-point scale.
3. Students consider that they have adequate opportunities to provide feedback, and according to the learning environment survey they mostly like to contribute to development of curricula.

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Liability at all management levels has been defined and described, and it supports the achievement of institutional purposes and the coherent performance of core processes</th>
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**Implementation (policy) description**

Employee liabilities are defined by different documents: the Statutes of the College (liabilities of the rector and vice rector), the Statutes of Office of Academic Affairs (liabilities of employees of the Office of Academic Affairs), and employment contracts or job descriptions (liabilities of members of the academic staff, etc.). The liabilities of the Student Council are regulated by the Statutes of the Student Body. A list of normative documents has been prepared to give an overview of organizational processes. The most important processes (admissions, graduations, etc.) have been presented as flowcharts or regulated by normative documents (Recognition of Prior Learning and Work Experiences, etc.). Process descriptions give an overview of employee liabilities when performing those processes.

Cooperation within the College supports the performance of key processes (e.g. the updating of procedures), and due to the small size of the organization, additional measures to encourage cooperation are not needed. At the same time, College employees participate in inter-institutional working groups of higher education institutions. For example, the educational technologist and the quality manager participate in e-learning working groups, the head of the Office of Academic Affairs has participated in a working group of higher education institutions regarding the process of recognizing prior learning and work experiences.

To support the College's management activities, in the 2010–11 academic year the College participated in a quality assessment project conducted on the basis of the EFQM Excellence Model (European Foundation for Quality Management) the aim of which was to contribute to developing the quality management system of the College, and in the course of self-evaluation to analyse the strengths and weaknesses of the College, thus increasing its competitiveness. The external evaluation resulted in recognizing the College's innovativeness; development of partnerships; the management of financial resources, information and educational processes; and student inclusion. The results of this project were used to implement improvement activities during the 2011–12 academic year. As part of this quality assessment project, several College employees participated as assessors at other schools under evaluation, thereby acquiring important knowledge and experiences in quality management to be used in their work at the College.

**Evaluation**

Review of the organizational processes and normative documents is primarily undertaken because of legislative requirements and changes, or changes in the organization of the work. Procedures related to key processes such as admissions and graduations, are reviewed on a regular basis. Annual employee satisfaction surveys provide opinions on the process management.

**Results**

1. Employees' knowledge of the policies for process management has improved (Figure 1.4), and the College's participation in external evaluations and employee involvement in preparing self-evaluations have contributed to this.

2. In 2011 satisfaction with the College management was in the range of 3.3 to 3.7 (on a five-point scale). Employees are most satisfied with policies governing the shaping of objectives and strategies (Figure 1.13)
Figure 1.4. Employee satisfaction related to process management

*Source: Employee satisfaction surveys*

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<thead>
<tr>
<th>Requirement</th>
<th>Internal and external communications of a higher education institution (including marketing and image building) are purposeful and managed</th>
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**Implementation (policy) description**

The purpose of the *internal communications* of the College is to keep employees informed about everyday activities and longer-term objectives. Communication occurs at meetings, by informal communication and by electronic means. Email and various email users groups are used as main communications channels. To manage and preserve information as well as to manage documents, the College maintains a system of shared folders (the U-disc) which can be accessed by all employees. Since 2010 the College has used the SharePoint platform to a small extent, but the aim is to make a wider use of it. A wiki platform is used for teaching, learning and working on projects. Urgent information is exchanged at meetings of field managers every other week, where minutes are taken and communicated to the entire staff. To exchange information about educational activities, the College holds briefings — “educational meetings” — once a month. A general meeting of the EITF is held at least once a year where the Management Board gives an overview of the performance of the entire organization and of its future plans. Meetings of the EITF Council, the EITC Council and the Advisory Board of the College are recorded and the minutes are made publicly available to all employees. Issue-specific meetings are held as needed. The College has a video conferencing system which enables anyone to attend meetings remotely. Skype options are used on a daily basis.

Important information is communicated to visiting members of the teaching staff by email, by briefings twice a year (at the beginning of each semester) and with an annually-updated newsletter for the visiting teaching staff. The Study Information System (SIS) and email are the official channels for communicating with students. At the initiative of the students the first College newspaper “UpDate” was released in January 2013.

The purpose of the *external communications* includes marketing aimed at different target groups, and image building for the College. The marketing manager is responsible for external communications. The College website is an important channel for external communications, and since 2011 it has been associated with social media platforms such as Facebook, Twitter, Flickr and YouTube to increase the College’s contacts with its students and alumni. Over the years these channels have become tools of direct marketing to reach potential learners.

The College introduces its learning opportunities to *student candidates of higher education institutions* during various fairs (*Teevit, Intellektika*, etc.) and Information Days. In cooperation with the ITL and its member companies, the College participates in events popularizing the field of ICT — introducing the ICT sector and IT learning opportunities to pupils of general education schools. A traditional Curiosity Day for those interested in the College is held once a year and in addition to
that, briefings for college entrants are held twice a year. These briefings are video-recorded and can be watched later by all who are interested. Student candidates with special needs are provided with separate briefings in cooperation with the Estonian Union of Persons with Mobility Impairment and Astangu Vocational Rehabilitation Centre. The role of the external communications aimed at partnership institutions of vocational education is to explain to their students who are studying in the field of IT, the opportunities to continue their studies at the professional higher education level under a shortened period of study (i.e. based on cooperation agreements it has been agreed as to which extent the studies at the partner vocational training centre are recognized by the College as studies under their curricula). The activity of a Student Robotics Club and its successful performance at the annual international robotics competition entitled Robotex Open contribute largely to the image-building process of the College (requirement 3.2.1 page 48). Among other things, the Robotics Club conducts workshops on sumo robot construction aimed at 8th to 12th graders in different schools, presenting opportunities for the use of robotics in teaching and learning science. The leading IT companies' interest in cooperation and support from Microsoft, Sybase, Oracle and others (supporters), contribute to the College image building as well. Its students and alumni also shape the College's reputation, expressed by employer satisfaction with the College graduates and students.

**Evaluation**
The efficiency of internal communications is assessed on the basis of annual employee surveys, the results of which are shown in Figure 1.5, and improvement activities are planned based on those results. For example, meeting memos have been written since 2012.

To assess the external communications, we monitor changes in numbers of candidates and the competition for student places; an overview of these trends is included in annual reports on admission periods.

**Results**
1. MS Outlook Group Calendar and a calendar of the College's events in SharePoint are used to effectively plan time and keep colleagues better informed.
2. Employee satisfaction with the internal communications is shown in Figure 1.5 where a slight decline in satisfaction may be due to the transition period caused by changes in the management.

![Figure 1.5. Employee satisfaction with the internal communications (on a five-point scale)](source: Employee satisfaction surveys)

3. In 2011 a transition to the new website took place.
4. The alumni survey in 2012 provided evidence of effective external communications and the College's good reputation, stating that the College is "a serious practice-oriented and student-centred institution of higher education", "the best higher education institution in the field of IT in Estonia". A continuously growing interest in studies at the College also proves its good reputation (929 applications in 2011 and 1015 applications in 2012).
5. As a result of image building, the competition has remained intense under conditions of an increasing number of state-funded student places (5.4 candidates per state-funded student place) (Figure 2.4).

<table>
<thead>
<tr>
<th>Areas for improvement</th>
<th>The action plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Policies for crisis situations</td>
<td>Conducting a risk analysis in the 2013–14 academic year</td>
</tr>
<tr>
<td>Regularity of surveys of external stakeholders (alumni, employers)</td>
<td>Updating the procedures for surveys in spring 2013</td>
</tr>
<tr>
<td>More methodical management of organizational knowledge (channels for sharing information, access, etc.)</td>
<td>More detailed mapping of information channels in 2013</td>
</tr>
</tbody>
</table>

1.2. Personnel Management

| Requirement 1.2.1 | The principles and procedures for employee recruitment and development arise from the objectives of the development plan of a higher education institution, and ensure academic sustainability |

**Implementation (policy) description**

The recruitment of academic staff is based on legislation, a normative document entitled "Qualification Requirements, Selection Procedures and Policies Regarding Members of the Academic Staff of the Estonian Information Technology College", and on the objective of ensuring the optimal size of the academic staff along with their required qualifications, as established in the College development plan. As a rule, all vacant positions are filled by way of public competition, using public databases and the College website for publishing offers. The College has developed solid cooperation with other higher education institutions, as well as other public and private organizations, to recruit visiting members of the teaching staff. The College includes its alumni in teaching activities to ensure successors to its staff. In the 2012–13 academic year, two College alumni are teaching here on the basis of service contracts; six alumni are included as visiting members of the teaching staff (i.e. 12%), and two College alumni work in the support structure of the College.

The principles for mentorship have been developed to support the teaching staff, which is also included as an objective in the development plan. Three mentors have been trained under the interuniversity Primus Programme. Feedback on mentorship has been positive.

Members of the teaching staff are encouraged to participate in training programmes, conferences and seminars for self-development. The College also encourages its ordinary teaching staff to pursue formal education, granting them time off and flexible work hours. In 2012 three members of the teaching staff were enrolled in formal education, one in doctoral studies and two in master degree studies. In recent years the funding under the Primus Programme has been of significant help in developing teaching competencies of the teaching staff. In addition, the teaching staff can apply for scholarships under the DoRa Programme, and other employees may get support under the Grundtvig and Erasmus programmes. The employees who want to participate in trainings will submit a request to their immediate supervisors and the personnel manager. Such requests also take into account the objectives identified during development interviews and the development trends of the College. The College enables the ordinary teaching staff to apply for a sabbatical semester for their professional development (keeping in mind the College’s objectives) in accordance with the Procedures for Applying for and Granting Sabbatical Semesters.

The College has one foreign member of the ordinary teaching staff — Truls Ringjob, and in the 2010–11 academic year Senior Lecturer Andrea Corradini taught at the College under the Doctoral
Studies and Internationalisation Programme (DoRa). International experience is also added through public lectures (requirement 4.3.1 page 60)

Evaluation

Documentation related to employee recruitment is changed based mainly on changes in legislation. A representative of the academic staff is always included in the amending process. Employee satisfaction surveys provide assessment of employee recruitment and development policies, and an important indicator is the length of time an employee has worked in the organization.

Results

1. Figure 1.6 provides an overview of employee satisfaction with available training opportunities. Since 2009, due to the Primus Programme, opportunities to participate in trainings have increased (about 25 trainings are completed each year), which probably is a reason why in recent years employees value training opportunities less than in 2008 and 2009 (provision of trainings is larger than time resources, etc.).

![Figure 1.6](image)

Figure 1.6. The College employee satisfaction with training opportunities

Source: Employee satisfaction surveys

2. The average rate of competition for academic staff position has been 1 to 2 as shown in Table 1.1

<table>
<thead>
<tr>
<th>Year</th>
<th>2008</th>
<th>2009</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>The rate of competitions</td>
<td>2</td>
<td>1,5</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

3. The average age of members of the teaching staff is 44 years, and compared with the 2009–2010 academic year it has remained the same. Figure 1.7 provides an overview of changes in the age structure, and Figure 1.8 compares the College with other professional higher education institutions where science or fields of technology are taught.
3. The College has a qualified support structure — nine employees out of 18 have master's degrees and seven have either professional higher education or bachelor's degrees. The age distribution of the support staff refers to the sustainability of the organization, and the breakdown by the length of service shows the stability of employment relationships (as of October 2012), illustrated by figures 1.9 and 1.10 respectively.

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Implementation (policy) description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1.2.2</strong></td>
<td>When selecting, appointing and evaluating members of the academic staff, their past activities (teaching, RDC, student feedback, etc.) are taken into account in a balanced way.</td>
</tr>
</tbody>
</table>

In order to participate in the competition for an academic position, candidates will submit documents referred to in the normative document entitled "Qualification Requirements, Selection Procedures and Policies Regarding Members of the Academic Staff of the Estonian Information Technology College". The selection committee will review the documents of eligible candidates, taking into consideration the candidate's previous experience and professional competence. In the
case of candidates who have previously taught at the College, the selection committee will also examine his or her performance reports and the results of student feedback surveys. The evaluation of members of the teaching staff is not conducted separately, but rather is combined with development interviews at the end of each academic year, and members are evaluated again when applying for the position at the end of his or her election period.

**Evaluation**

The normative documents are reviewed and amended as needed; for example, in 2012 the important changes included an amendment to the staff selection regulation regarding the role of the EITC Council in selecting the teaching staff, and the code of ethics for the teaching staff.

**Results**

1. The qualifications of the College teaching staff meet the requirements for professional higher education. Half of the members of the teaching staff have PhD and 16.7% have master's degrees. Figure 1.11 presents the comparison of the qualifications of ordinary teaching staff in different institutions of professional higher education.

![Figure 1.11. Comparison of ordinary teaching staff in professional higher education institutions in the 2011–12 academic year, percentage of the number of teaching staff](image)

*Source: The RCUA comparison of indicators*

2. Student feedback on the teaching staff has been positive (4.1–4.2 on a five-point scale), and so far the members of the teaching staff who have held the position have been reselected to fill the same position.

| Requirement 1.2.3 | The principles of remuneration and motivation of employees are clearly defined, available to all employees, and implemented |

**Implementation** (policy) description

One of the basic goals established in the College development plan is to develop motivated and professional employees and a quality-oriented organizational culture. Organizational growth and a slight decline in satisfaction with the system of employee recognition resulted in the need to list the principles of employee remuneration and benefits in a formal document. In 2012 a written document regarding remuneration was prepared. The document has been introduced to employees and it is available in a shared folder (on the Server). The remuneration document defines minimum wages of different position categories, the principles of calculating workloads for the teaching staff, and rewards to employees in their incentive packages. Remuneration is based on equal treatment, ensuring an equal pay for similar qualifications and work. Additional tasks and work that exceeds the agreed workload will be compensated separately according to the agreement (time off or remuneration). Where possible, employees' wages are periodically reviewed and revised. Staff motivation includes noting important events (birthdays, jubilee at work, birth of a child, marriage), providing sporting opportunities free or at discount prices, organizing joint events, and additional
vacations or paid Health Days. Remuneration of the academic staff is based on their workloads as detailed in the above mentioned document regarding qualification requirements. Workload includes teaching, methodological work, development as well as administrative duties. To calculate the workload, the teaching staff fill out a relevant report form in the SIS at the end of each academic year.

Evaluation
Employee surveys assess the principles of remuneration and recognition. A relevant question was included in the questionnaire for full-time employees in 2011, but it has been in the questionnaire for visiting members of the teaching staff since 2010. Due to the need to define workload of the academic staff more precisely, the principles of workload calculation have been clarified and the reporting system of the teaching staff in the SIS has been changed.

Results
1. Remuneration principles are considered transparent, as shown in Figure 1.12.

<table>
<thead>
<tr>
<th>Year</th>
<th>Satisfaction with recognition</th>
<th>Perception of recognition by colleagues</th>
<th>Remuneration principles are transparent</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>4</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>2009</td>
<td>4</td>
<td>3</td>
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<td>2010</td>
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</tr>
<tr>
<td>2011</td>
<td>4</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>2012</td>
<td>4</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

Figure 1.12. Employee satisfaction with their recognition and remuneration (on a five-point scale)
Source: Employee satisfaction surveys

2. Since 2009 both the workload of a subject and the number of students have been taken into account to calculate the teaching workload, instead of the previously used method of counting classroom hours. An extra coefficient is added when teaching is conducted in a foreign language.

3. In general, the remuneration system has been motivating for visiting teaching staff, although in 2012 there was a slight decline in satisfaction, when the average assessment was 3.6 (on a five-point scale). In 2011 satisfaction of visiting teaching staff with remuneration was 3.9. The reason for that may lie in the expectation of earnings growth after the recession.

4. The proportion of wages in the College’s expenses has steadily been c. 60%. There was a slight growth in wages in 2012 (Figure 1.18).

Requirement 1.2.4 Employee satisfaction with the management, working conditions, flow of information, etc., is regularly surveyed and the results used in improvement activities

Implementation (policy) description
Ensuring the regularity of satisfaction surveys and development interviews in order to increase employee motivation, has been identified as one of the objectives in the College development plan. Since 2007 employee satisfaction surveys have been conducted on a regular basis each autumn. The questionnaire includes prompts related to leadership, objectives, strategies and other areas (Figure 1.13). Respondents are grouped according to structural units, which allows one to compare the results of different units and with the entire organization. The analysis of survey results is followed
by a management meeting where the quality manager and the personnel manager are included, to
discuss possible improvement activities. Since 2007, personal feedback has been both obtained and
provided during annual employee development interviews, of which the immediate managers
present aggregate summaries to the Management Board. Before starting with these interviews, the
College organized an appropriate training for the managers in 2007. Satisfaction surveys for visiting
teaching staff have been conducted at the end of each academic year since 2010. The purpose of
those surveys is to analyse visiting teaching staff’s satisfaction with both the organisation of studies
and the necessary support services.

Election of the Employee of the Year brings forth employee feedback on colleagues, as each
employee has an opportunity to present candidates for the award, adding their reasons, from
amongst whom the EITF Management Board will select the Employee of the Year.

Lecturer of the Year has been selected (since 2008) based on student feedback surveys which
provide assessments according to the following criteria: teaching methods, the use of lecture time,
teaching materials, the principle of equal treatment, provision of feedback to students and increasing
the activity of students. The member of the teaching staff who receives the highest rating from
students will be given the title of the Lecturer of the Year and he or she will be recognized with a
token of appreciation at the College graduation ceremony. In addition, the two best members of the
teaching staff will also be recognized.

Evaluation
Satisfaction survey questionnaires are updated each year before annual employee satisfaction
analyses, and so the entire process is evaluated each year and improved as needed. For example, the
questionnaires have been updated to prevent different interpretations. A positive feedback from
employees on the survey process is very important. Improvement activities will be initiated based on
the survey results; for example, a “guide for the teaching staff”, providing organizational information
about educational activities and contact details, is updated at the beginning of each academic year to
improve communication.

Overall staff satisfaction is one of the aggregate indicators in the College development plan being
monitored on an annual basis.

Results
1. College employee satisfaction declined slightly in 2010 which may be related to an after-
effect of the recession and the changes in the College management. As seen in Figure 1.13,
the results of satisfaction surveys have stabilized and shows a slight upward trend.

![Figure 1.13. Overall satisfaction of the College employees](image)

Source: Employee satisfaction surveys
2. Three members of the ordinary teaching staff (Margus Ernits, Truls Ringkjob and Kristiina Hakk) have been awarded the title of the Lecturer of the Year and two of them have received the award twice.

3. An example of improvement activities that were initiated based on the results of feedback surveys and development interviews was the creation of new positions to adjust the existing workloads—an administrator for the Linux operating system was recruited in 2012, and the competition for the position of project manager of the ICT laboratory was started.

4. Figure 1.14 presents the results of visiting teaching staff surveys. Responses to the prompt, "the role of my subject in the curriculum", declined in 2012 because the survey of that year paid special attention to how the visiting members of the teaching staff perceived the relationships between their subjects and other subjects in the curriculum.

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**Figure 1.14. Results of visiting teaching staff feedback surveys** (on a five-point scale)

<table>
<thead>
<tr>
<th>Requirement 1.2.5</th>
<th>Employees participate in international mobility programmes, cooperation projects, networks, etc.</th>
</tr>
</thead>
</table>

**Implementation (policy) description**

Academic staff mobility is one of the aggregate indicators in the College development plan which is used to evaluate the success of the implementation of a development plan. The College academic staff has the opportunity to carry out teaching assignments within the framework of the international Erasmus mobility programme. College employees are offered opportunities to participate in trainings at partner institutions of higher education and at enterprises. Several visits to partner institutions of higher education in Lithuania and Finland were undertaken within the framework of the ESF projects in the 2011–12 academic year, and in December 2012 a visit to the partner institution of higher education in Germany was undertaken. The two purposes of these visits are to increase the contacts and to specify future joint activities. The College participates as a partner in several Erasmus Intensive Programmes to foster international cooperation, including joint teaching and learning. In 2012 we partnered in two intensive programmes (WISDOM and I-C-SID). Based on experiences in participating in intensive programmes and to retain productive working relationships and mobility opportunities, the College will be a coordinator of an Intensive Programme entitled "Deploying IT Infrastructure Solutions" (DITS) in 2013. In addition to the Erasmus Programme and its Intensive Programmes, several members of the College teaching staff also participate in other cooperation networks. For example, Truls Ringkjob participates in the Cisco Networking Academy programme, and Jaanus Pöial participates in the network of informatics teachers of Estonian higher education institutions. Kärt Rummel has been the member of the Language in Higher Education Research Group (LiHERG), Great Britain, since 2000.

When possible, the College employees have participated in different professional meetings abroad — in conferences and seminars. For example, employees have repeatedly participated in the CCNP thematic conferences and meetings (2008, 2009, 2010, 2011); the Hack.lu conferences (2010, 2011, 2012); and the TechEd conferences (2009, 2010).
**Evaluation**

Employees provide feedback about their participation in mobility programmes, and based on this feedback appropriate changes in activities will be planned. For example, an extra workload associated with mobility programmes is divided between two members of the teaching staff. Mutual visits under different projects are assessed and future activities planned on the basis of memos prepared after each visit.

**Results**

1. The academic staff have become more appreciative of teaching under the Erasmus Mobility Programme and Intensive Programmes. The number of other international events has slightly decreased, but the number of people participating in various events is showing a continuously rising trend (Figure 1.15).

![Figure 1.15. Employee participation in events (including as educators) in foreign countries](image)

2. In March 2011 the College organized an IT Networking and Cooperation Day to strengthen cooperation links with its partners. In addition to the College employees, the representatives of five partnership schools participated in that event.

**Requirement 1.2.6** Employees base their activities on principles of academic ethics

**Implementation (policy) description**

The principles of academic ethics are described in a document entitled "Qualification Requirements, Selection Procedures and Policies Regarding Members of the Academic Staff of the Estonian Information Technology College". The College academic staff respect their colleagues and students, are fair and value their profession. The College employees are aware of and comply with copyright policies, receiving advice on these matters from the legal adviser and the educational technologist. We recommend that new teaching materials will be licensed under different free content licenses (primarily under various Creative Commons licenses).

When working with students’ personal data, the employees rely on the EITSA Procedure for Processing Personal Data enacted in 2009 which establishes employee responsibilities when using (sensitive) personal data. Processing of sensitive personal data is registered at the Data Protection Inspectorate as well.

**Evaluation**

To evaluate the compliance with the principles of academic ethics, the College uses student feedback surveys which include the prompt — students were treated equally. Only a small number of appeals also provides assessment on how the ethical principles are respected.

**Results**

1. A new version of the "Qualification Requirements, Selection Procedures and Policies Regarding Members of the Academic Staff of the Estonian Information Technology College" has been approved by the EITC Council.
Over the years students have rated equality of treatment by the teaching staff in the range of 4.4–4.7 (on a five-point scale).

<table>
<thead>
<tr>
<th>Area of improvement</th>
<th>The action plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compiling a handbook for new employees, and regulating</td>
<td>The personnel manager will assemble applicable</td>
</tr>
<tr>
<td>copyright issues</td>
<td>documents into one set by the end of 2013</td>
</tr>
</tbody>
</table>

1.3. Management of financial resources and infrastructure

**Requirement 1.3.1** The allocation of financial resources of a higher education institution as well as the administration and development of infrastructure are economically feasible, and are based on the objectives of the development plan of an institution of higher education and national priorities (except private institutions)

**Implementation** (policy) description

The planning and implementation of the College’s budget is distinguishable from the general budget of the EITF. The College aims at constantly keeping revenues and expenses in balance, and the College development plan contains a financial projection for up to 2014. Revenue of the College primarily comes from tuition fees (c. 80% of the revenue). Figure 1.16 shows the proportions of the revenue. In order to keep revenues and expenses in balance, the revenue from in-service training and the ESF projects are included as additional resources for implementing several activities (Figure 1.17). The analysis of a total budget includes an examination of the costs of student places as well.

The school building is managed by an EITF subsidiary *EITSA Kinnisvara OÜ*. Hardware and software are obtained through procurements based on accepted principles of public procurement (including those of cost-savings and rationality). Hardware is mostly acquired under operating leases which are as a rule renewed every three to five years. Operating leases enable the College to avoid problems with the disposal of old technology. Current investments in hardware and software have regularly been c. 30,000 euros per year and are based on the objectives in the development plan and national priorities — creating tangible resources in order to provide high-quality education. The College has modern facilities for conducting practical classes, the development of which is supported by Estonian and foreign leading communication companies, and additional resources have been obtained through various projects. The last major upgrade of laboratories was undertaken in 2012.

- A Cisco network technology laboratory was opened in 2001 and due to successful cooperation with Estonian and foreign leading communication companies, it has continuously been upgraded with new equipment. In 2012 Hewlett-Packard network devices for teaching both wired and wireless networks were added, and during the most recent upgrading process in 2012, more routers and firewall devices were acquired.
- The Centre for Communications and Information Technology, opened in 2008, has been assembled by Elion and Ericsson, and enables students to learn state-of-the-art Internet and digital TV devices as well as the development of new applications.
- A mobile/wireless software development lab was established in the 2010–11 academic year which enables students to learn practical software development for operating systems such as Android, iOS and Windows Phone 7.
- Initial investments in distance lab hardware were made in the 2010–11 academic year. In 2012 additional investments were made to launch a distance lab (servers, network devices, etc.).
The College started to record lectures in 2008, and significant additional investments were made in 2012 (an application server, the lecture recording equipment, audio and video equipment, licenses). Based on the principle of economic rationality, server virtualization has been undertaken. In 2012 most College servers were virtualized and a cluster was created based on the VMWare virtualization software. In addition to reducing IT and power costs, virtualization enables more efficient use of existing resources, improves application availability and performance, creates a less risk prone disaster recovery plan and greatly simplifies systems management.

To optimize the use of resources, the College has joined the consortium of higher education institutions to develop a joint study information system, which initially included nine institutions of professional higher education, and now two universities and one institution of vocational education and training have joined as well.

**Evaluation**

Budget implementation analyses and reports on the entire organization are compiled for six, nine and twelve months including the final evaluation. The College budget is distinguished from those analyses. Financial analyses assess different risks (probable decline in tuition fee intake, student numbers, etc.) and subsequent measures are adopted as needed. For example, the College managed to cope with the economic recession in 2009–2010 relatively well without laying off employees, by agreeing with them on a week of unpaid leave.

**Results**

1. Revenues and expenses of the College have been in balance over the years, and constant cost control helped to avoid problems during the economic recession (Figure 1.16).
2. As state-commissioned education provides a significant portion of tuition fees, in the period 2009–11 the revenue decreased due to the reduction of the compensation for state-funded student places, as shown in Figure 1.17, which was made up by the increase in non-state-funded student places in 2010 and 2011. Thus, real decline in revenues was only experienced in 2009, and ongoing cost control spared the College from more severe problems during the recession.

![Figure 1.16. Overview of the College's revenues and expenses, in thousands of euros](image-url)
3. In 2008 due to the move into a new building, administrative costs rose significantly, but in recent years they have stabilized and will remain under 30% of total costs (Figure 1.18).

4. Figure 1.19 presents changes in the cost of a student place and shows how much of expenses must be covered by other means, primarily by in-service training and project resources.
5. Since summer 2012 the College students have used Microsoft Live@Edu, a cloud-based email system, which has lessened expenses on security software and which has been integrated, for user comfort, with the information system of the College.

<table>
<thead>
<tr>
<th>Requirement 1.3.2</th>
<th>A higher education institution uses information systems that support its management and the coherent performance of its core processes</th>
</tr>
</thead>
</table>

**Implementation (policy) description**

One of the objectives in the development plan is to continue to improve the College information system and its coherence.

The College uses the following information systems supporting the management and the coherent performance of its core processes:

- The Study Information System — **SIS** — of professional higher education institutions which was launched in 2010;
- Accounting software — Enterprise by Hansa World;
- Personnel records software — Regina;
- The Admissions Information System — **SAIS**.

The SIS is a significant platform for managing information related to teaching and learning, used by students as well as by academic and support staffs, enhancing administrative activities with prompt and statistical information. The SIS is interfaced with the accounting software and the Admissions Information System providing optimal information and data exchange. In addition, the College uses learning management systems which support educational activities:

- A College wiki — [http://wiki.itcollege.ee](http://wiki.itcollege.ee);
- E-learning platform — Moodle, and Wikiversity to conduct courses;
- Lecture capture technology — Echo360.

**Evaluation**

As the core process of the College involves teaching and learning, the College is focusing on an ongoing development of the Study Information System. The system is developed under the EITF leadership in cooperation with other institutions of professional higher education, and the steering committee of the Study Information System meets as needed, but at least twice a year, to agree on additional development activities and to settle financial issues. In addition to cooperative development, in which the College has been an initiator of several significant solutions (e.g. an interface with accounting software, registering for resits), the College independently develops individual modules of the Study Information System based on its own interests (e.g. a module for updating data on alumni).

**Results**

1. The College considers it important to interface the SIS with other management-related information systems. Therefore the Admissions Information System (SAIS) and accounting software have been interfaced with the SIS. Data transmission into the Estonian Education Information System (EHIS) is also performed through the SIS.
2. The SIS survey platform (feedback) and queries (statistics) are important modules from the perspective of making management decisions.
3. The volume and use of lecture recordings are showing a rising trend, see Table 2.1 (r.2.4.5 page 46).

<table>
<thead>
<tr>
<th>Requirement 1.3.3</th>
<th>The working conditions of the staff, and the learning and RDC conditions of students (library, studios, workshops, laboratories, etc.) meet the needs arising from the specifics of an institution of higher education and the expectations of members</th>
</tr>
</thead>
</table>
Implementation (policy) description

One of the key objectives set in the College development plan is to provide modern educational, physical and technical resources. The College meets requirements established for the learning environment developed in cooperation with professional higher education institutions. Modern learning and technical resources enable the College to prepare specialists as developers of innovative software and administrators of those solutions.

The school building of the College has 3751 m² of useful space. Three auditoria with 46, 100 and 220 seats respectively and four seminar rooms with seating from 16 to 24 are used as lecture rooms. The College has created opportunities for students to conduct independent or group work in a separate room (the former library reading room, equipped with the necessary equipment). Over the years the College has furnished learning facilities with state-of-the-art educational technology, including about 150 computers with permanent Internet connections (up to 1 Gbit/s) including both HP desktop computers and Apple iMac computers, all have a dual-boot configuration using resident Windows 7 and Linux (Apple computers include MacOS X Snow Leopard as well), and an array of accessories. Four laboratories are equipped with specific hardware and software: robotics (8 workstations), Cisco (15 workstations) and multimedia (8 workstations) laboratories, and the Centre for Communications and Information Technology (12 workstations). There are four computer classrooms (three of them each have 28 workstations and one has 12 workstations).

The College building is fully covered with a wireless network (WiFi) employing a network speed up to 54 Mbit/s. Following a 2012 agreement between the College and the library of the Tallinn University of Technology, students and the academic staff of the College enjoy significantly wider opportunities to borrow books and use databases.

In order to make efficient use of classrooms, studies are conducted in three different forms, enabling growth of student body. The Student Council has a separate room in the building. The College supports the activities of the Student Council with resources allocated from its budget and the members of the Council may apply for scholarships.

The working conditions of the staff meet requirements. The development plan includes as one of the objectives, maintaining a modern work environment for its employees. Ordinary members of the teaching staff have their individual offices, and the office of visiting teaching staff is equipped with all devices needed for their work (a printer, scanner, etc.). On the second and fifth floors of the building staff recreation rooms are furnished. The organization has elected a work environment representative who conducts occupational safety risk analyses on a regular basis. Administrative issues of work environment may be addressed to EITSA Kinnisvara OÜ.

Evaluation

Occupational safety risk analyses are conducted every three years since 2002. Student satisfaction is regularly evaluated by the relevant feedback survey.

Results

1. Comparable occupational safety risk analyses were conducted in 2008 and 2011. The results of surveys show employee ratings to be in the range of 1.1 to 1.4 on a six-point scale, it can therefore be concluded that there are no significant risk factors in the College work environment.

2. In October 2012 a labour inspector from the Labour Inspectorate checked the College work environment and did not identify any deficiencies.

3. Student satisfaction with the learning environment is measured by a separate survey on the learning environment, where students assess their satisfaction and make suggestions for improving IT infrastructure, catering and other indicators related to the learning environment.

Improvements

<table>
<thead>
<tr>
<th>Area for improvement</th>
<th>The action plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Systematic development of laboratories</td>
<td>Including additional resources in laboratory management</td>
</tr>
</tbody>
</table>
2. Teaching and Learning

2.1. Effectiveness of teaching and learning, and formation of the student body

<table>
<thead>
<tr>
<th>Requirement 2.1.1</th>
<th>A higher education institution has defined its educational objectives and measures their implementation</th>
</tr>
</thead>
</table>

**Implementation (policy) description**

Objectives related to teaching and learning are defined in the development plan (point 3.2) and in general these can be divided into the objectives related to curricula and those related to students. In the first case, the emphasis is on the compliance of curricula with requirements of the labour market, the second case includes objectives related to the organization of studies and student numbers. These objectives are in compliance with the social need and the capabilities of the College. The Estonian legislation regulating the field of higher education (the Institutions of Professional Higher Education Act, the Standard of Higher Education, etc.), national strategies for higher education, performance agreements between the Ministry of Higher Education and the College (objectives 5 and 6), employer expectations of graduate competencies (objectives 1 through 3), student expectations of learning environment, organisation of studies and content of studies (objectives 4, 7 and 8) have served as bases for preparing the College development plan. While setting objectives, the College took into consideration both the influences of the external environment (demographics, economics, legislation) and capabilities of its resources based on the internal environment.

**Evaluation**

The existing objectives related to teaching and learning were formulated based on the results of an internal discussion seminar in 2009 and a round table meeting held with employer representatives in 2011. A discussion on the implementation of the development plan, including the results of the 2011–12 academic year and the action plan for the 2012–13 academic year, was held in March 2012 including the top management, all field managers and specialists. Goal achievement is measured each year (in the period November - December) and the results are used to draft an action plan for the following academic year.

**Results**

1. An essential objective — to provide state-commissioned education — is showing a rising trend and is about to reach the goal. Due to the closure of a curriculum at the Tallinn School of Economics, its students continued their studies at the College which resulted in a large increase in the number of state-funded student places in the 2007–2008 academic year, as shown in Figure 2.1. We believe that a steady increase in implementation of state-commissioned education is due to extra attention paid to the process of timely graduations (process mapping, supportive organisation of studies, surveys, and seminars for last-year students and their supervisors).

2. The rate of timely graduations is lower than expected, which we believe may largely be caused by the fact that students work in parallel with their studies (working student population is almost 70%). Over the recent years c. 25% of students have completed their studies within 4 years (standard period of study with an additional year), as shown in Figure 2.2.
3. An important objective of the College is to reduce the dropout rates, under conditions where the labour market constantly needs more IT specialists, and also since almost 50% of students already work in the field of IT.

### Requirement 2.1.2
A higher education institution creates the prerequisites to ensure its graduates national and international competitiveness

#### Implementation (policy) description
The competitiveness of graduates is primarily ensured by the compliance of curricula with the needs of the labour market (including international competitiveness, as this is a field where the technology and know-how, as well as operating companies, are supranational). To enhance international competitiveness, the College has, in its Statutes, included English as a language of instruction in addition to Estonian (subjects in the CISCO module are taught in English, and also the subjects that international students have chosen for their curricula). Starting from the second year of studies, the College students may study and undertake practical training in different foreign countries under the Erasmus Programme, and they can participate in international intensive programmes throughout their studies. Intensive Learning Weeks, integrated in the learning process, develop professional competencies as well as transferable skills, primarily communication and teamwork skills, which support competitiveness in the labour market. For the first time in spring 2012, the Intensive Learning Week was international, and one student from the Vaasa University of Applied Sciences, Finland and two students from Vilnius College, Lithuania participated. By the 2012–13 academic year the College plans to combine the Intensive Learning Week with the international Intensive Programme led by the College.

Corporate programmes which are integrated with our curricula, the completion of which enable students to take certification exams, have a significant role in ensuring the competitiveness of
graduates. The timeliness and relevance of the material taught (bringing the latest knowledge into the school) are ensured through close contacts with employers and the inclusion of practitioners in the teaching staff. This provides students with an opportunity to tackle real-world problems with authentic degrees of difficulty and complexity as learning tasks. Technological resources are constantly upgraded which also supports the competitiveness of College graduates.

Students’ practical training is governed by the Internship Guidelines which establishes requirements for the facilities of practical training and its tasks. Additional information to assist students with issues related to practical training is made available on the College website under the section Internship. Competencies of the graduates are assessed through feedback from internship supervisors, as well as by including practitioners of the field as reviewers of final papers and in evaluation committees. The assessment criteria related to the topicality of a final paper and the application of its results demonstrate the compliance of the graduates with expectations of the labour market.

To evaluate how the graduates succeed in the labour market, alumni surveys including relevant questions and prompts (how did you find your current job; information on jobs and salaries; etc.) are conducted.

Continuation of studies abroad, an option several College alumni have chosen over the years, is one of the indicators of international competitiveness of the graduates. To our knowledge they have continued their education in master degree studies at higher education institutions in Sweden, Germany and Great Britain.

Evaluation

As the College students undergo practical training during their last year of studies when most subjects have been completed, satisfaction of internship supervisors can be considered as the main indicator of employer satisfaction with competencies of our graduates. Assessments by employers are discussed at the Curriculum Council and changes are incorporated as needed. Alumni surveys also provide opinions on the competencies of the graduates.

Results

1. The satisfaction of internship supervisors have been positive over the years. Lower satisfaction in 2008 was due to the fact that a large number of former students of the Tallinn School of Economics who had joined the College and whose knowledge in speciality subjects was not equal to that of the College students, and thus caused lower satisfaction of internship supervisors in that one year.

![Figure 2.3. Satisfaction of internship supervisors with the College trainees (on a ten-point scale)](image)

*Source: Feedback from internship supervisors*

2. According to the 2012 alumni survey 94% of alumni work, including 24% of them continue their studies at the same time. 6% of the alumni are committed to studies only or are currently at home taking care of their children. The vast majority of alumni (96%) say that their work is closely related to the acquired profession, 67% of the alumni work as senior
specialists and 8% of the alumni have created their own companies, or are owners of companies.

| Requirement 2.1.3 | The number of student places is planned in accordance with the social need and the potentials and purposes of an institution of higher education |

Implementation (policy) description
Since 2003 the College has provided state-commissioned education (requested by the Ministry of Education and Research), which has increased over the years in accordance with demand by the labour market. In the current development plan, it has been decided to retain the existing admission numbers until 2014 regardless of demographic decline, taking into consideration a continual high demand for IT specialists in the labour market (ITL’s survey). This objective is supported by the capacity of College resources (space, people) which in recent years has been appropriate for annual admissions of 300 new students. This number has met the student candidates interest in acquiring higher education at the College, at the same time sustaining competition for both state-funded and non-state-funded student places. Based on the significant number of employed students, the College provides its students with the opportunity to complete their studies in the form of evening classes, starting from the 2003–2004 academic year; and in the form of distance learning, starting from the 2006–2007 academic year. This has enabled the students who are already employed or live outside Tallinn or Harju County to acquire professional higher education in the field of IT. At the same time the launch of distance learning helped the College to diversify its space resources and enhance opportunities for lifelong learning (including obtaining a new profession).

Evaluation
The planning of student places is assessed each year while evaluating the aggregate indicators of the development plan and drafting the budget. Requests for state-funded student places are submitted to the Ministry of Education and Research. The EITC Council will take note of the number of allocated student places and based on that it will approve the number of non-state-funded student places. Meetings with the representatives of the ITL and major employers are also held to discuss necessary changes in the creation of student places. For example, in 2011 the College Advisory Board decided to propose discontinuing admissions to the Technical Communication Curriculum, as the demand for these specialists compared to those of other curricula had significantly declined.

Results
1. Due to the constant need for IT specialists in the labour market, the Ministry of Education and Research has allocated state-funded student places to the College in growing numbers, as seen in Figure 2.4.

![Figure 2.4](image_url)

**Figure 2.4.** The change in numbers of state-funded student place and competition for each place

*Source: Analyses of admissions*
2. The breakdown of students admitted to the College by form of study has remained stable over recent years — c. 50% of entrants have been enrolled in daytime study, 15% in evening classes and 35% in distance learning.

Figure 2.5. Breakdown of newly matriculated students by age, in percentage terms

3. In the case of age distribution of College entrants, an increase in the proportion of students of 25+ can be seen, which relates to the objective in the College development plan supporting lifelong learning (educational objective No. 7).

4. The current labour market requires workers to continuously acquire new knowledge or additional specialities and this has led to the need for additional higher education for workers. For example, in 2011 11.4% of entrants already had bachelor's degrees and 4.3% had master's degrees. But in 2012, 18% of entrants already had higher education (including 5.3% of them had master's degrees).

<table>
<thead>
<tr>
<th>Requirement</th>
<th>The admission rules are consistent with the mission and purposes of an institution of higher education and support the formation of a motivated student body</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1.4</td>
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</table>

Implementation (policy) description

The procedures for student admissions have been relatively stable since the College was established. According to the College Admission Rules, student candidates shall be accepted by way of public competition based on the admission rankings, taking into consideration average grades of their secondary education certificates or average grades of general subjects of their vocational education certificates. The result of a state mathematics exam will give up to one additional point. Also, additional points can be earned on the bases of individual achievements, e.g. when a candidate has gained first through third places at the national skills competition in the field of information technology entitled Young Master. This condition was added to the College Admission Rules in June 2012 and is directly related to the formation of a motivated student body, supporting motivated students with professional knowledge and experiences in commencing their studies at the College.

In addition to main admissions in years 2008 through 2011, individuals who had completed IT-related vocational education could apply to state-funded student places which had become vacant in the second year under previously agreed curricula.

The College is a partner in the ESF programme entitled "Resumption of interrupted education in higher education — TULE" and provides education to those who have dropped out of their studies in the first cycle of higher education. When ranking applicants, both the prior learning experiences and the applicant's motivation to complete their studies are taken into account.
Evaluation
An admission analysis will be compiled at the end of each admission period, within which conclusions about the formation of the student body will be drawn and the organisation of admissions (including the Admission Rules) will be revised as needed.

Results
1. Consistent admission rules and their publication on the College website have ensured a stable interest in the College and an increase in numbers of students. The number of applicants was 602 in 2010 and 1015 in 2012. Taking into consideration that about 300 students commence studies each year, the competition for one student place is quite intense (see Figure 2.4 for competition for state-funded student places).
2. A large number of first-year students are employed in the IT field, which relates to their motivation to complete their studies. For example, 22% of those who started their studies in daytime or evening classes, and 51% of those who were admitted to the distance learning classes, were already working in the IT field. According to alumni surveys, 57% of alumni had worked before commencing studies or were working during their studies.
3. Out of 15 learners who have continued their education under the TULE programme [an acronym from Estonian words meaning: Come Again, Graduate Successfully], three have already completed their studies and three have dropped out.

<table>
<thead>
<tr>
<th>Requirement 2.1.5</th>
<th>Students are provided with opportunities to study at a higher education institution regardless of any special needs</th>
</tr>
</thead>
</table>

Implementation (policy) description
When designing the College building, the requirements established by Regulation No. 14 of the Minister of Economic Affairs and Communications of 28 November 2002 Requirements for Ensuring Access to Public Buildings for Individuals with Mobility, Vision or Hearing Impairments, as well as the recommendations by Kaido Kikkas, a member of the College teaching staff and a specialist in support technology, were taken into consideration, to enhance access to the College for individuals with special needs.

The College counselling system also includes students with special needs — one student counsellor acts as a contact person for special-needs students, counselling them on issues related to their studies and study allowances. There are also students at the College who act as tutors to other students, and who have acquired the knowledge and skills to help people with special needs through trainings by the Estonian Union of Persons with Mobility Impairment. In 2010 and 2011 the teaching and support staffs of the College have also undergone trainings related to issues of special needs.

Under the Primus Programme, students with special needs can apply for scholarships to cover additional costs related to their special needs and studies (a sign language interpreter, the use of transportation for the disabled, copying/printing, etc.). According to the document entitled "Procedures for Application for and Payment of National Study Allowances at the Estonian Information Technology College", the special-needs students belong to one of the priority target groups when granting allowances from the special allowance fund of national study allowances.

Since 2010 the College has held briefings before admission periods, for potential students with special needs, to introduce learning opportunities at the College. The College website also has a section for Special-needs students.

In 2012 the College received a positive response to its request to the Ministry of Education and Research, submitted under the Primus Programme, for funds to procure learning aids for students with disabilities (adjustable height desks which would facilitate taking notes by students using wheelchairs, and a support technology solutions kit for students with mobility or coordination impairments). The provision of appropriate technical aids encourages individuals with mobility or coordination impairments to study at the College, and supports their studies.
Evaluation
The Office of Academic Affairs analyses access to learning by special-needs students, and funds have been allocated to address the needs as required. Until 2009 hearing-impaired students were supported (for using sign language interpretation service) by the Ministry of Education and Research, and later the students with special needs have been able to apply for scholarships under the Primus Programme.

Results
1. In 2010, within the framework of the Primus Programme, the College building was mapped by experts of the Estonian Union of Persons with Mobility Impairment and Tallinn Association of Persons with Mobility Impairment from the aspect of physical accessibility by individuals with special needs. The College is the only educational institution among mapped professional higher education institutions with full accessibility (total score for mapping was 2.7 points out of a maximum of 3 points).
2. In 2010 the Estonian Chamber of Disabled People recognized the IT College with a letter of appreciation for its good will, open mind and comprehensive support of special needs students.
3. The number of applications for scholarships for special-needs learners has a growing trend at the College (one application in the 2009–10 academic year, two applications in the 2010–11 academic year, six applications in the 2011–12 academic year, and six applications in autumn semester of the 2012–13 academic year).
4. In 2012 the College purchased seven adjustable height desks which were placed in different auditoria, and a support technology solutions kit which can be used in the classroom for individual work by students.

Improvements

<table>
<thead>
<tr>
<th>Areas for improvement</th>
<th>The action plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gathering more information on the continuation of education by alumni</td>
<td>Updating alumni survey information in autumn 2013</td>
</tr>
<tr>
<td>Further shaping a motivated student body</td>
<td>Finding best prospective students outside Tallinn and Harju County</td>
</tr>
<tr>
<td>Due to the higher education reform, clarifying admission rules</td>
<td>Review of the Admission Rules</td>
</tr>
</tbody>
</table>

2.2. Study Programme Development

Requirements

| 2.2.1 | A higher education institution bases its new study programmes on its purposes and the needs of the labour market, and takes into account the strategies of the country and expectations of the society |

Implementation (policy) description
The College bases the launch of new curricula on its mission to focus on one study programme group/field of study — computer science — and to provide the best professional education in that field in the region.
In 2000 the College started with one curriculum — Information Technology Systems — which was developed into two curricula: IT Systems Development and IT Systems Administration by 2002. Taking into consideration the needs of the labour market, the Information Systems Analysis Curriculum was added in 2003, and the Technical Communication Curriculum in 2004. According to the procedure which was in force in Estonia, the College underwent evaluation by an international committee, and both curricula — IT Systems Development and IT Systems Administration — were
accredited in 2003. In 2005 accreditation included the Information Systems Analysis and Technical Communication curricula as well. The College considers employer feedback on its educational activities very important, and to keep its curricula on a modern level, the College organizes various events in cooperation with its partners, to find solutions for meeting the needs of a continuously changing labour market (for example a conference entitled "IT Specialists 2013" in March 2011; and the Partner Day in December 2012).

The College has discussed the probability of launching a joint curriculum with the Vilnius College, which has failed due to the differences in national regulations, therefore we have rather remained in cooperating relationships, and we exchange students under the Erasmus Programme. Arising from an objective in the College development plan — to increase the extent of studies in a foreign language — the College has discussed the probability of launching a curriculum taught in a foreign language.

The College curricula are associated with international certification programmes. The Cisco Networking Academy programme enables students to take CCNA and CCNP certification exams. Microsoft IT Academy Program membership at the IT Pro Platinum level allows the use of the learning materials of Microsoft Official Curriculum (MOC) and Microsoft Official Academic Course (MOAC). The Oracle Academic Initiative Programme provides free use of Oracle database software. In 2011 the College joined the Linux Professional Institute's certification programme which enables the use of LPI certification programme trainings. In 2012 the College entered into an agreement with the Apple Inc iOS Developer University Programme which enables the College to teach the iOS platform developments.

**Evaluation**

As a result of the accreditation of study programmes in 2003, the College's curricula were fully accredited by an international expert committee. Due to changes in the Estonian higher education quality assurance system, the College underwent a transitional evaluation of study programme groups in 2010 and as a result it was granted the right to conduct studies in the Informatics and Information Technology study programme group for an unspecified term.

**Results**

1. The shortage of IT systems developers in the labour market has been emphasized in discussions with partners (Partner Days, etc). As the demand for information systems developers had significantly increased, in 2009 the College started to admit students to that curriculum in the form of distance learning as well. Figure 2.6 presents the student breakdown by curriculum and clearly shows an increase in the proportion of developers in the student body.

![Figure 2.6. Breakdown of College entrants by curriculum, in percentage terms](image)

*Source: Analyses of admissions*

2. As the labour market needs more IT systems developers and administrators, and as prospective students showed little interest in the Technical Communication Curriculum,
admission to the Technical Communication Curriculum was ended from 2012 onward, based on the recommendation by the EITF Council and decision by the EITC Council.

| Requirement 2.2.2 | Development activities related to study programmes are systematic and regular; different stakeholders are involved in the development of study programmes |

**Implementation (policy) description**

Development activities related to curricula are based on feedback from different stakeholders (subject monitoring by students, alumni feedback, meetings with partners) and are implemented through the Curriculum Council which was formed in 2007. The Curriculum Council is governed by its Conduct of Business, and decisions are made based on the document governing the organization of studies.

As changes are not generally made based on a single opinion, all proposed changes are usually discussed by the Curriculum Council at the end of a calendar year, and these changes will take effect in the next academic year. Elective subjects to be included in the curriculum, or other minor changes, are integrated with the current versions of curricula, where possible.

**Evaluation**

The Curriculum Council was initially composed of eight members, two of whom were employer representatives. The second panel included an alumni representative as well, and a student representative was invited to attend meetings. In order to further increase employer contribution to the Curriculum Council, it was decided in 2011 to include an additional employer representative in the Curriculum Council and to include the student representative as an ordinary member. The Curriculum Council is appointed for two years, thus the current council stays in office until 2013. Results achieved by that Curriculum Council and the need to make changes in its composition will then be analysed.

**Results**

1. Significant results by the Curriculum Council include: the review of student workloads during the transition to the European Credit Transfer and Accumulation System (ECTS), preparations for a transitional evaluation of the study programme group, drawing conclusions based on the results of that transitional evaluation, and bringing curricula into compliance with the requirements for outcomes-based learning.
2. The Curriculum Council includes different stakeholders in its work — representatives of alumni, students and employers.
3. In addition to seminars related to outcomes-based curricula organized for the teaching staff in 2009 and 2011, two College employees have completed a training entitled "Outcomes-Based Curricula in Higher Education" under the Primus Programme.

| Requirement 2.2.3 | Graduate satisfaction with the quality of instruction and employer satisfaction with the quality and suitability to the requirements of the labour market of graduates are surveyed and analysed; the results are considered in the development of study programmes |

**Implementation (policy) description**

As this report has highlighted, due to cooperative relationships with its partners and alumni, the College has received direct feedback on how its graduates are doing in the labour market throughout the period of its operation. Employer feedback is mostly received through feedback surveys following practical trainings. This feedback received from internship supervisors gives some indication of the level of graduates because practical training is undertaken immediately prior to writing final papers, when students have completed at least 80% of the curricula. Feedback on practical training will be
analysed by the Curriculum Council and results are used in curriculum development. Alumni surveys provide opinions primarily about the so-called transferrable skills (development of self-expression, theoretical knowledge, knowledge of foreign languages, teamwork skills, etc.).

**Evaluation**

Assessments of alumni have been compiled at the college since 2005. As numbers of alumni were small, feedback surveys were irregular. In 2012, when the last survey involving an entire alumni population was conducted, it was decided that alumni surveys would be conducted each year directed at those who had just graduated from the College; and to keep in touch with the rest of the alumni body, surveys involving all alumni would be conducted every two or three years.

**Results**

1. The 2012 alumni survey showed that alumni consider transferrable skills (e.g. self-expression, teamwork, and negotiating skills) as being important in their current work and therefore more attention should be paid to the development of those skills.
2. According to the 2012 alumni survey, 94% of alumni are employed and 6% of alumni have continued their education or are at home on a child-care leave. 86% of alumni work in the field of their specialty, only 1% of alumni do not pursue their professions.
3. In developing IT Systems Development and IT Systems Administration curricula, discussions with collaborative partners are held, to take into account the requirements of the labour market. For example, in cooperation with the Estonian Information System’s Authority (RIA), the College has already prepared the subject of scripting for a cybersecurity module which will be included in the IT Systems Administration Curriculum.
4. The Curriculum Council analyses student and alumni feedback surveys and, for example, the following changes have been made in curricula based on them: the inclusion of the subject of scripting languages in the IT Systems Administration Curriculum, and subjects related to mobile/wireless software development in the IT Systems Development Curriculum.

**Improvements, learning experience**

<table>
<thead>
<tr>
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<th>The action plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Further development of in-service training courses related to subjects of formal education (advanced courses)</td>
<td>Mapping the subjects of formal education on which advanced courses in in-service training or narrower specialization can be built, in autumn 2013</td>
</tr>
<tr>
<td>Analysis of constructive alignment of curricula</td>
<td>One curriculum, in the action plan for the 2012–2013 academic year</td>
</tr>
<tr>
<td>A quality assessment of the study programme group in 2013</td>
<td>Conducting the analysis of curricula in autumn 2013</td>
</tr>
<tr>
<td>Systematic feedback from alumni</td>
<td>To improve the annual alumni survey process in spring semester of 2013</td>
</tr>
</tbody>
</table>

**2.3. Student academic progress and student assessment**

**Requirement 2.3.1** Student academic progress is monitored and supported

**Implementation** (policy) description

Students can choose a suitable form of study and workload when commencing their studies. Both full-time and part-time studies are available, although in the latter case free student places are not provided. The minimal student workload has been defined by the Study Regulations (point 3.1.1). Student academic progress is supported by the following measures:

**Counselling** based on different forms of study — office hours for counsellors of the Office of Academic Affairs are set to accommodate students of the evening classes and distance learning as
well; counselling is also provided through different channels (email, Skype, telephone). Since 2009 the College has used students acting as tutors for fellow students to help them settle into the college studies, and during their ongoing studies.

**During the period of settling into the college studies**, i.e. at the beginning of the academic year, first-year students receive by email "A Freshman’s ABC" (including a schedule for the orientation week, important guidelines and contacts) and receive tutoring (important information, the College building and staff introduction). The issues that have caused most problems over the years have been assembled under Frequently Asked Questions on the College website.

**To support student academic performance**, a schedule of available resits for subjects taught in the previous semester is prepared for students who failed to pass some exams or pass/fail assessments. To better acquire a subject, students are given an opportunity to re-learn the subject if they have failed it three times. The College provides pre-sessional courses as electives in subjects which have been most difficult for students (mathematics and English). Students are provided consultation on all subjects (using a variety of channels).

**Talented and motivated students have the opportunity** to participate in various club activities (the Robotics Club, Free Software Club, Microsoft User Group, Media Club, etc.) which give them opportunities to effectively apply their skills and talents in addressing challenging tasks. Intensive Learning Weeks, held since 2010, provide students with additional opportunities to apply their knowledge and skills as a team, tackling different practical tasks.

**To support students’ economic coping capacity** during their studies, procedures to apply for study allowances are in place, ensuring equal opportunities for all applicants. Payments from the special allowance fund are made on the basis of a student’s economic situation. In 2007 the College established an additional allowance for freshmen who are not covered by a national allowance to partially compensate their accommodation and transportation expenses. Several companies have established scholarships to support talented students. Long-term scholarship partners are AS EMT and Elion Enterprises Limited; Elisa Eesti AS, Ericsson Eesti AS, and the City of Tallinn have also awarded scholarships in different academic years. An overview of the scholarship programme is made available to students on the College website (Scholarships).

**Evaluation**

At the end of each academic year the workload completed by a student is reviewed and changes to it are made as needed (transferred from full-time study to part-time or vice versa, or deleted from the matriculation register). Student feedback surveys provide assessments of student counselling.

**Results**

![Student drop-out rates comparison](image)

**Figure 2.7. Student drop-out rates in comparison with average drop-out rates in the field of natural and exact sciences**

*Source: Analyses by IT College and statistics for higher education by MER*
1. Student drop-out rates and their comparisons with drop-outs in the field of natural and exact sciences as shown in Figure 2.7 describe student academic progress.

2. Over the years student satisfaction with the counselling service has remained at the level of 4.1–4.2 (on a five-point scale), meaning that c. 90% of students have answered that information received through counselling is adequate.

3. Forty alumni (i.e. 7% of alumni) have been awarded cum laude at graduation. In 2012 the College had the largest number of cum laude graduates — ten alumni.

4. Several partners have supported talented students with scholarships. Figure 2.8 gives an overview of the size of the scholarship fund and the number of scholarships.

![Figure 2.8. Scholarship funds for students by companies](image)

**Requirement 2.3.2**  
Student assessment supports learning and is in line with learning outcomes

**Implementation** (policy) description

The assessment of study results (including the procedures for exams, pass/fail assessments and defences) are governed by point 5 of the Study Regulations, and the challenging of assessment results are governed by point 3.2.9 of the Study Regulations. The assessment is outcomes based; teaching and assessment methods are chosen according to the learning outcomes defined in syllabuses and these methods enable achievement of them. Achievement of learning outcomes is assessed based on assessment criteria. Students are informed about the learning outcomes and assessment criteria before they begin their studies and they can use them as additional learning guidelines. The teaching staff has completed assessment-related trainings (e.g. assessment in outcomes-based education, in 2010; and in cooperation with teaching staffs of the Tallinn University of Technology and Tallinn University, didactics in science education, in 2011). Main assessment methods are identified in syllabuses, but it is possible to vary them based on the organization of studies, audience and other specifics (e.g. forms of study and level of learners). To supervise students in the learning process, they are provided with regular feedback on their work.

**Evaluation**

Syllabuses are reviewed according to the syllabus updating procedure. The Office of Academic Affairs advises the teaching staff on formulating learning outcomes and assessment criteria, and on their relevance to one another. Each member of the teaching staff sees student feedback provided anonymously in the Study Information System, and can revise their assessment procedures accordingly.

**Results**

1. In last two academic years, student responses to the prompt "assessment criteria were clear before the educational activities started" have been 4.3 on average (on a five-point scale). In
the case of opinions significantly lower than the average, the relevant teaching staff has been asked to revise those assessment criteria.

<table>
<thead>
<tr>
<th>Requirement</th>
<th>A higher education institution has an effective system for taking account of prior learning and work experiences</th>
</tr>
</thead>
</table>

**Implementation (policy) description**

The College's system of recognition of prior learning and work experiences (VÕTA, abbreviation in Estonian) complies with the principles agreed upon among higher education institutions. The process has been mapped and approved by a resolution of the EITC Council. Application is governed by the relevant procedure and application forms have been developed. Academic advisors support students in the process of analysing their prior learning and work experiences and applying for recognition. The College website also provides various support materials (video lecture, references). Decisions are made by a committee formed by a directive of the rector which is comprised of functioning specialists — members of the teaching staff, an individual who is responsible for procedural part of the recognition of prior learning and work experiences, and the quality manager; as well as experts outside the College when needed (primarily in the case of assessing work experience). Assessment methods are based on the evidence submitted by the applicant and are appropriate for competencies under evaluation. The College gathers recognition statistics, but has not set any numerical objectives. The number of applications has increased over the years. Since the 2012–13 academic year, submission of applications for recognition of prior learning and work experiences and their processing are predominantly based on the SIS.

**Evaluation**

The procedure for recognition of prior learning and work experiences is regularly reviewed and revised as needed. So far, feedback on the availability and clarity of information, the application process and assessment has not been requested, being considered impractical. There has been only one appeal regarding the decision in the 2006–2007 academic year and free-response sections in a regular student feedback on the learning environment have not included negative signals on the process of recognition of prior learning and work experiences.

**Results**

1. To support lifelong learning, the College has a procedure for recognizing prior learning and work experiences in place, and the number of submitted applications has remained stable over the years (figure 2.9).

![Figure 2.9. Statistics on recognition of prior learning and work experiences](image-url)
Improvement

<table>
<thead>
<tr>
<th>Areas for improvement</th>
<th>The action plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feedback on procedures for recognizing prior learning and work experiences</td>
<td>In cooperation with other professional higher education institutions, a seminar on the best practice for gathering feedback on recognition of prior learning and work experiences in 2013</td>
</tr>
</tbody>
</table>

2.4. Support processes for learning

| Requirement 2.4.1 | The organisation of studies creates an opportunity for students to complete their studies within the standard period. The principles for preparing timetables support the appropriate use of time of students and teaching staff |

Implementation (policy) description

Teaching and learning are based on curricula governed by the Statute of Curricula. The list of subjects in a curriculum is divided into semesters (in the case of a standard curriculum) based on the full-load requirements that each semester would contain mandatory and elective subjects for at least 30 ECTS credits and in the case of distance learning for 25 ECTS credits. Each subject has a syllabus prepared by a member of the teaching staff, and most of the elective subjects have a recording of an introductory lecture as well. The latter helps students familiarize themselves with the subject content and thus avoid unnecessary time cost associated with an unreasonable choice. The list of electives for the following semester will be defined at least one month before the beginning of the semester. Students may assemble their own curricula, declaring the subjects selected at the beginning of a semester. For an additional fee it is possible to earn more credits than prescribed by the standard student workload.

A timetable is the basic document for organizing educational activities, which is prepared according to the list of subjects and will be publicised in the SIS no later than one week before the beginning of the semester, after consulting the relevant member of the teaching staff. Educational activities are generally planned based on a semester, but cyclical study is used when needed. Educational activities of daytime study are provided throughout the entire semester (16 weeks), only a few subjects end upon completion of a semi-semester (8 weeks). Educational activities in the evening classes have already been arranged in cyclical study for four years (teaching takes place during 8 weeks), except subjects where the specifics require them to be taught for entire semesters (e.g. programming subjects and English). As to daytime study and evening classes, when possible, classroom teaching is planned for four days a week, leaving one workday to students for individual learning. Distance learning is arranged as cyclical study usually taking place on every third weekend.

Schedules for exams and pass/fail assessments are prepared in cooperation with the teaching staff and publicized no later than a month before the examination period for the daytime study and evening classes, and at the beginning of the semester, together with a timetable, for distance learning.

Evaluation

Student feedback surveys regarding the learning environment provide valuable opinions about activities related to the organization of studies.

Results

1. Figure 2.10 presents student satisfaction with the distribution of student workload, showing an increase in satisfaction in 2012, due to curriculum development having taken into account the changes in semester workload, and due to the added opportunity to watch video lectures at later times.
2. The organization of studies and the structure of curricula ensure an opportunity to complete studies within a standard period.

**Requirement 2.4.2** A higher education institution provides students with counselling related to their studies and career, including prospective students

**Implementation** (policy) description

The Office of Academic Affairs organizes academic counselling based on its statutes. There are two academic advisors employed — one for students of daytime study and evening classes, and the other for distance learning. Academic advisors have completed training in counselling and are competent in rules regarding teaching and learning both at the College and outside of it. Students who tutor fellow students also have a significant role in the counselling process. Tutor briefings for freshmen at the beginning of each academic year have become a tradition, and tutor contact details are made available for them on the College website. The academic affairs specialist, who is responsible for all issues related to admissions, informs student candidates about teaching and learning matters. The person filling that position has received training in career counselling as well, and provides it when needed. Speciality-specific issues are directed to curriculum managers. The teaching staff counsel students on all subject-related issues in their fields (including assessment).

**Evaluation**

Student satisfaction surveys provide useful opinions on the effectiveness of counselling.

**Results**

1. Student satisfaction with academic and career counselling is at the level of 4.1–4.2 (on a five-point scale).
2. The employees of the Office of Academic Affairs have completed basic trainings in counselling and one employee has also completed trainings in career counselling and counselling-related special courses.

**Requirement 2.4.3** Student international mobility is supported, including studies in foreign institutions of higher education. The recognition of studies in foreign institutions is based on the Lisbon Convention. Systems have been created to support foreign (guest) students

**Implementation** (policy) description

The College supports international mobility of its students through the Erasmus Programme. The aim of participating in the student exchange programme is to become visible to international partners and to add international dimension to the students’ education. As of January 2012, the College has partnerships with 22 universities/professional higher education institutions in twelve different countries under the Erasmus Programme. The Erasmus coordinator advises students on selecting partner institutions and filling out documentation, organizing briefings about international mobility.
opportunities (twice in each academic year) and acting as a contact person for students during their exchange periods. The studies undertaken at a foreign institution of higher education are agreed between the home and host institutions and the College will fully recognize them as studies completed under its own curricula.

The College provides its students with opportunities to learn some subjects in English, to better cope within the international market. These courses offer language practice to the current students and enables the College to receive international students. Today 99% of the College's educational services are delivered in the Estonian market, but in the 2011 autumn semester eight international students participated in educational activities, and 17 subjects, corresponding to 65 ECTS credits, were therefore taught in English. Foreign (guest) students can study subjects taught in English at the College under the Erasmus Programme. The College has a support system in place for international students: students get all initial information from the Erasmus coordinator who will remain their contact person throughout their exchange periods. All international students are provided with a personal trained tutor from amongst the College students. The College is a partner of the Erasmus Student Network Tallinn (ESN Tallinn) as well. ESN Tallinn is a student organisation, officially established in 2003. The purpose of ESN Tallinn is to offer international students non-academic activities while studying in Tallinn.

The College participates as a partner in several Erasmus Intensive Programmes. An Intensive Programme (IP) is a short programme of study meant for students and teaching staffs of different countries and higher education institutions. The EITF has supported student participation in those programmes with additional scholarships.

**Evaluation**

Performance indicators of the Erasmus Programme are recorded in annual Erasmus reports. Student feedback surveys contain several questions about learning mobility to obtain adequate assessment.

**Results**

1. Students consider participation in Intensive Programmes to be most interesting, as shown in Figure 2.11.

![Figure 2.11. Number of students who have participated in learning mobility](image_url)

2. Since 2009 students and members of the teaching staff have participated in the following Intensive Programmes: PIM (Promoting Intercultural Management Competencies for Working Life in the Baltic Sea Region); IPEAI (The Intensive Programme on Embedded and Ambient Intelligence); IC-SID (Intercultural Approaches to Service Innovation & Design Methods); WISDOM (Web Information System Data Organisation Modelling) and PROMAND (Programming Mobile Applications for Android System).
Requirement 2.4.4
Students are periodically asked for feedback on the organisation of studies, assessment, counselling, etc.; the surveys are analysed and the results are taken into account in improvement activities.

Implementation (policy) description
Student feedback has been obtained since the early years of the College, and at first the surveys employed samplings of students. Systematic feedback from all students has been collected since 2007, when the College started to monitor subjects in the SIS at the end of each semester; and at the end of a survey period, the quality manager has summarized the results and forwarded the summary to management and the teaching staff. The feedback option is actively used by 25–30% of students whose assessments include a large number of commentaries, a positive indicator. In the 2010–11 academic year, feedback surveys were transferred into an updated Study Information System and since then the teaching staff has immediately seen responses by the students during the survey period. Subject-related surveys are composed of two parts: assessments of the members of the teaching staff and of the subjects themselves. In addition to the subject monitoring, a survey regarding the learning environment is carried out once a year, but which was not conducted in the 2010–11 academic year due to technical reasons. In addition, several different surveys are conducted as needed, such as a survey of those who discontinued their final papers, a survey of students who were deleted from the matriculation register, etc. The survey-related process is governed by a document approved by the EITC Council in 2008 — Procedures for Student Evaluation of Teaching and Courses.

The results of feedback surveys are analysed, and then discussed with appropriate leaders who decide on the necessary improvement activities (analyses related to the organization of curricula are discussed in the Office of Academic Affairs, other curriculum-related issues are discussed in the Curriculum Council, etc.). For example, as a result of a survey related to the learning environment, WiFi connectivity was improved in the College building.

Evaluation
As there have been significant changes in the organization of surveys, the survey-related issues were reviewed in 2012 and revisions are incorporated in the documents referred to above.

Results
1. Over the years student satisfaction with organization of studies has been at a level where c. 90% of the students indicated that they were satisfied with it.
2. Student satisfaction with counselling was 4.2 (on a five-point scale) in 2012.
3. In the course of subject monitoring, students evaluate the teaching staff based on the following criteria: suitability of teaching methods, use of lecture time, quality of teaching materials, feedback provided for students, and encouragement of active student participation. Assessments provided by students in the 2012 spring semester ranged from 4.2 to 4.5 (on a five-point scale).
4. Students evaluate subjects according to the following criteria: importance of a subject in the curriculum, balance between theoretical and practical knowledge, availability of learning materials, assessment criteria of subjects by teachers, and coherence among the subjects. Assessments provided by students in the 2012 spring semester varied from 3.9 to 4.3 (on a five-point scale).

Requirement 2.4.5
Modern technical and educational technology resources are used to organize educational activities

Implementation (policy) description
The College organizes educational activities by means of the Study Information System which provides first hand information on educational activities to its administrative and teaching staffs and students. The core functions of the Study Information System are designed to preserve student data, administer and display information related to organization of studies, show study results, the
completion rate of the curriculum, and students' academic mobility. In addition there are several supporting functions, such as registrations for resits, modules for applying for recognition of prior learning and work experiences, and the recently added functions of calculating the workload of the teaching staff and preparing timetables.

To flexibly carry out educational activities, the College uses the Moodle Learning Management System (for e-learning), the wiki.itcollege.ee Knowledge Management Platform and the BigBlueButton Web Conferencing System. The Echo360 Lecture Capture Technology, introduced at the College in 2008, enabled us to expand our lecture recording capability to five auditoria by autumn 2012. The teaching staff usually process the recordings themselves and then make them available to students. All College auditoria are equipped with dedicated data-video projectors. Technical resources of laboratories are listed on page 23.

**Evaluation**

In the course of an annual review of the objectives of the development plan and preparation of action plans, the College evaluates technical resources used in conducting studies.

**Results**

1. The development plan has defined two objectives related to e-learning: the extent of e-learning-supported courses in a curriculum will be 75%, and to ensure that the already developed e-courses would meet the students' needs, the College actively participates in the process of e-learning quality assurance at the Estonian e-Learning Development Centre. Based on this, the College has set an objective to provide 10 e-courses which have been awarded a quality label by 2014. Figure 2.12 gives an overview of the results so far.

![Figure 2.12. Number of e-courses awarded quality labels](image)

2. The teaching staff maintain their own websites on the College server to disseminate information on educational activities, and several members of the teaching staff use video recordings in their subjects. Preparing learning objects is gaining popularity among members of the teaching staff.

3. Due to the popularity of video recordings as well as the opportunities added in 2012, viewing existing video recordings and making new ones have both increased (Table 2.1).

<table>
<thead>
<tr>
<th>Academic year</th>
<th>2009/2010</th>
<th>2010/2011</th>
<th>2011/2012</th>
<th>2012 (up to 01.12)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recordings</td>
<td>233</td>
<td>596</td>
<td>858</td>
<td>1356</td>
</tr>
<tr>
<td>Viewings</td>
<td>12419</td>
<td>34905</td>
<td>40870</td>
<td>37858</td>
</tr>
</tbody>
</table>
Improvements

<table>
<thead>
<tr>
<th>Area for improvement</th>
<th>The action plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Continuing development of the SIS</td>
<td>Introduction of timetable modules and the SIS-based syllabuses in autumn 2013</td>
</tr>
</tbody>
</table>

3. Research, Development and/or Other Creative Activity (RDC)

3.1. RDC Effectiveness

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1.1</td>
<td>A higher education institution has defined its RDC objectives and measures their implementation</td>
</tr>
</tbody>
</table>

**Implementation** (policy) description

The College has defined its RDC objectives in its development plan as providing high-quality education and conducting applied research through R&D by students. Based on this, the development plan identifies the development of laboratories and publishing as key indicators. To achieve these objectives, the College makes use of additional resources obtained through cooperation partnerships and ESF projects.

**Evaluation**

The achievement of objectives is evaluated each year when analysing the key indicators of the development plan. As the objectives of development activities are often associated with funding by ESF projects, assessments are also provided when analysing the results of these projects.

**Results**

1. The objective in the development plan related to publishing is to reach the level of one publication per member of the teaching staff each year by 2014. Figure 3.1 provides an overview of the results so far.

![Figure 3.1. Publications per member of ordinary teaching staff, calculated in full-time positions](image)

2. Upgrading of laboratories is a continuous process carried out with the support of various sources of financing. Every year at least one of the laboratories has been upgraded; for example, the equipment in the Cisco lab was upgraded in 2010 and 2012, the distance lab and mobile software development lab were completed in 2011, and hardware and software of computer rooms were upgraded in 2012.
A higher education institution monitors the needs of society and the labour market, and considers them in planning RDC activities

Implementation (policy) description
As a member of the ITL, the College participates in surveys of the needs of society and the labour market, being included in the Estonian ICT Cluster. The teaching staff uses information received from the cluster to offer the College students topics for their final papers.

The College does not receive national research funding and the number of members of the teaching staff is small, thus the capability of conducting research projects is small as well. Therefore, members of the College teaching staff have participated in grants received at the University of Tartu, Tallinn University of Technology and Tallinn University.

Development activities by the teaching staff primarily involve development of teaching and learning environments. For example, Margus Ernits has been in charge of establishing a distance lab which gained the attention of the Erasmus partners in Finland. Due to the existence of this new lab a number of final papers by students have been prepared on the topic "the use of distance lab in the development of software modules". Based on the needs of the labour market and in cooperation with Ericsson Research, development work has been carried out in student final papers.

The robotics laboratory of the College has been a base for cooperation with the Estonian Academy of Arts in developing devices to facilitate the coping of special-needs people, and a number of final papers have been written on those devices.

Evaluation
We analyse the needs of the labour market and society, and the results are assessed after having held meetings with partners, while evaluating key results of the development plan and setting new objectives each year.

Results

1. Based on the needs of the labour market, the College has established a regional centre for Cisco network technology which in addition to conducting the College educational activities and preparing final papers, is used by students of the Tallinn University of Technology.

2. Kaido Kikkas is participating in the targeted financing research topic "E-learning Systems with Distributed Architecture, Their Interoperability and Models of Application" at Tallinn University. Jaanus Pöial is participating in the University of Tartu project entitled "Static Analysis of Programs".

3. To assess students' independent work, the members of the teaching staff, Jaanus Pöial and Antti Andremann, have created a testing system for programming tasks which is integrated into the Moodle Learning Management System. Students (Johan Miller and Viljar Poopuu) in their final papers have also contributed to developing a testing system, and the teaching staff have issued publications based on that testing system.

4. In cooperation with the Estonian Academy of Arts, the following diploma papers based on the requirements of special-needs individuals have been completed: Jaanika Liiv — "Sound Visualizer for the Hearing Impaired" and Kristi Kuustik — "Device to Facilitate the Use of Home Appliances by Blind People".

5. The distance lab environment enables students to consolidate knowledge and skills acquired in lectures and seminars, and to use the lab potentials while preparing their final papers.

Improvements

<table>
<thead>
<tr>
<th>Area for improvement</th>
<th>The action plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Defining RDC activities more clearly in the development plan</td>
<td>Identifying the RDC objectives and associating them with the needs of the labour market in the new development plan in the 2013–14 academic year</td>
</tr>
</tbody>
</table>
3.2. RDC resources and support processes

| Requirement 3.2.1 | A higher education institution has an effective RDC support system |

**Implementation (policy) description**

As the College development activities are primarily funded through various projects, these projects are managed by project managers to enable the teaching staff to contribute more time in the development process; and the IT infrastructure related to project objectives is administered by the IT Office. The organization supports employees’ efforts to continue their studies in master degree or doctoral programmes, providing flexible work hours to accommodate needed study time. It also accommodates time needed to take certification examinations.

The educational technologist and the legal adviser advise the teaching staff on issues relating to intellectual property.

The College includes its students in RDC activities, involving them in robotics and programming projects which have been supported by the EITF scholarships. Intensive Learning Weeks are regularly held at the College each spring where students work on development tasks set by employers in the form of team work, and under the supervision of the teaching staff.

**Evaluation**

The RDC support system is evaluated while key results of the development plan are assessed and new objectives set.

**Results**

1. Students have participated in ACM International Collegiate Programming Contest preliminaries in 2004 through 2010, and starting from 2010 in the IEEE preliminaries which have been supported by EITF scholarships. In the IEEE contests 2000 teams are participating, and the College students achieved 173rd place in 2012, 668th place in 2011 and 46th place in 2012.

2. Since 2002 the College Robotics Club has successfully participated in the international robotics contest – Robotex the overview of which is provided in Table 4.1.

**Table 4.1** Results achieved by the College students at the international robotics contest

<table>
<thead>
<tr>
<th></th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>rope</td>
<td>room</td>
<td>football</td>
<td>football</td>
<td>football</td>
<td>football</td>
</tr>
<tr>
<td>First award</td>
<td>TUT</td>
<td>EITC</td>
<td>EITC</td>
<td>EITC</td>
<td>EITC</td>
<td>TUT</td>
</tr>
<tr>
<td>Second award</td>
<td>EITC</td>
<td>EITC</td>
<td>TUT</td>
<td>EITC</td>
<td>EITC</td>
<td>UT</td>
</tr>
<tr>
<td>Third award</td>
<td>UT</td>
<td>EITC</td>
<td>EITC</td>
<td>TUT</td>
<td>EITC</td>
<td>EITC</td>
</tr>
<tr>
<td>Number of</td>
<td>13</td>
<td>20</td>
<td>19</td>
<td>20</td>
<td>22</td>
<td>22</td>
</tr>
<tr>
<td>participating</td>
<td>teams</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Source:** www.robotex.ee

3. In 2010 Tuuli Zahvatkin, a *cum laude* alumna of the College, participated as an information technology specialist in the EuroSkills competition held in Portugal where she won the bronze medal.

4. 17% of the ordinary teaching staff continue their education in doctoral studies and 17% in master degree studies. Two members of the teaching staff — Kristiina Hakk and Kärt Rummel — have obtained their PhDs while working at the College.

5. Members of the teaching staff have obtained certificates recognized in the IT field: Jaanus Pöial – Sun certificate, Kaido Kikkas – LPIC-1; Truls Ringjjob and Indrek Rokk – CCNA; Kärt Rummel - Certificate of Proficiency in English (CPE); CEFR Level C2.
| Requirement 3.2.2 | A higher education institution has financial resources needed for RDC development and a strategy that supports their acquisition |

**Implementation (policy) description**

As professional higher education institutions do not receive grants for R&D, their development activities are entirely project based which means they need to be prepared to cover costs associated with the self-financing of projects. Based on the College development plan, the College appreciates the cooperation with the business sector in development activities and partners’ contributions to procuring needed infrastructure. For example, Elion Enterprises Limited, EMT AS, Ericsson Eesti AS and others have made significant investments in hardware and software for the College laboratories. The College has developed policies related to donations, and partner companies are awarded Major Contributor titles and letters of appreciation.

**Evaluation**

The existence of financial resources is analysed when drafting a budget and evaluating result indicators of the development plan. The availability of funds is also analysed when writing project applications depending on the need for cost sharing.

**Results**

1. During the period 2007–2011, companies have donated to the College around 700,000 euros for procuring infrastructure and software (see Figure 3.2). For example, based on the needs of the labour market, the communication technology lab was established in cooperation with Elion Enterprises Limited and Ericsson Eesti AS.

2. The College has participated as the project manager in one to three projects each year and also as a partner in an average of three projects a year. For example, in the project on curriculum development and cooperation entitled "Updating common core curricula of the Estonian Information Technology College and creating a cooperation model with enterprises and its launch based on the needs of the labour market".

3. The infrastructure development project entitled "Modernization of infrastructure of ICT teaching labs needed for increasing the proportion of practical work and enhancing the quality of educational activities", "Establishing the mobile/wireless software development lab", etc.

| Requirement 3.2.3 | A higher education institution participates in different RDC networks |

**Implementation (policy) description**

The College participates in various networks associated with development activities. An important network is the ITL cooperation network — the Estonian ICT Cluster:

- One of the sub-goals of the Estonian ICT Cluster (in 2009 through 2011) was to introduce ICT potentials, find cooperation opportunities and initiate new cooperation projects with other industries.
- One of the sub-goals of the Estonian ICT Cluster 2.0 (in 2012 through 2014) is to establish systematic cooperation with higher education institutions through the involvement of applied research and product development processes.

During 2004–2007 the College participated in the Baltic Sea Network (BSN), a regional network of higher education institutions of countries around the Baltic Sea, which organized meetings among partners to initiate cooperation projects and exchange information. BSN cooperation experience became the foundation for subsequent IP projects.

We participate in educational networks in order to acquire the newest technological knowledge. Participation in Cisco Networking Academy, the Microsoft IT Academy Program at the IT Pro Platinum level, Linux Professional Institute, Apple Inc iOS Developer University programmes provides the teaching staff with opportunities to obtain and test the newest technologies, and provides students...
with the access to learning materials as well as the opportunity to prepare for certification examinations.

Students who are interested in Microsoft technologies, access to innovations, trainings and international contacts may apply for the Microsoft Student Partner programme (MSP).

**Evaluation**

The effectiveness of participating in educational and development networks is evaluated at meetings related to curriculum development once a year. Each new cooperation offer will be evaluated individually with regard to feasibility and the importance of participating.

**Results**


2. The College has been a partner in the following Intensive Programmes: IPEAI PIM, IC-SID, WISDOM (r. 2.4.3 page 43). In 2013 the College will be the leader of an Intensive Programme entitled "Deploying IT Infrastructure Solutions" (DITS).

<table>
<thead>
<tr>
<th>Requirements 3.2.4</th>
<th>RDC infrastructure is being updated and used effectively</th>
</tr>
</thead>
</table>

**Implementation (policy) description**

The College infrastructure is used for educational activities, in-service training and development activities. As mentioned earlier (r 1.3.1 page 23) the College notably includes its partners' resources to modernize its infrastructure. For example, the Elion Enterprises Limited, EMT AS, Ericsson Eesti AS, Helmes AS, Baltic Computer Systems AS (BCS), and others have made significant investments into laboratory hardware and software. To increase the effectiveness of using its infrastructure, the College has focused on virtualization.

**Evaluation**

Potentials to modernize the infrastructure are evaluated each year when drafting budgets and planning investments.

**Results**

1. An overview of donations to the College is presented in Figure 3.2.

![Figure 3.2. Overview of company donations to the College, in euros](image)

<table>
<thead>
<tr>
<th>Area for improvement</th>
<th>The action plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Developing the RDC support system</td>
<td>Based on feedback from the teaching staff to carry out mapping in the 2013–14 academic year</td>
</tr>
</tbody>
</table>
### 3.3. Student research supervision

| Requirement | 3.3.1 | A higher education institution involves students of all academic cycles in research, creative or project activity; and systematically surveys student satisfaction with their supervision |

**Implementation (policy) description**

The College research, creative or project activity is primarily associated with learners' final papers which are, based on the Study Regulations, written on acute and specialty-related topics and have practical value. The organization of practical training supports practical orientation in final papers (tasks of practical training are closely related to learning outcomes of the corresponding curriculum, and as practical training is undertaken parallel to writing the final paper, the practical orientation of research topics is ensured).

During the preparation of their final papers, students are supported through a series of workshops in the first of which students are introduced to the process of composing and defending final papers, and in the subsequent workshops students present their interim results. In recent years College has invited supervisors from outside companies to these workshops, to get their feedback regarding the progress of the work.

To provide students with the knowledge and skills on how to carry out practical IT-related projects and develop teamwork skills, the College curricula include a subject entitled "Project". In the course of that subject a concept formulated by students or supervisors will be fulfilled. Topics like realization of novel robotics solutions, an innovative software project and realization of a web service may serve as examples.

The College uses the Innovation Voucher Programme as an opportunity to involve its teaching staff and students in development projects. At the beginning of 2012 the EITC was registered as an official provider of innovation voucher service. The projects ordered will be carried out by students under the supervision of members of the teaching staff responsible for the project. Unfortunately the Innovation Voucher service has not been used often because the College's capability to participate in these projects is significantly reduced since the companies' orders are usually very generalized and require a significant effort to clarify the details, and the College resources of the ordinary teaching staff are limited.

Student participation in development projects is motivated by the IT scholarship programme of the City of Tallinn which aims at supporting student initiatives in carrying out projects; for example, students have carried out projects related to the application of different technologies, and analysed the security of websites.

The Intensive Learning Week which has taken place at the College for two years already serves as a good example of an opportunity for students to engage in practical creative work. During that week students will solve practical tasks submitted by companies, and by the end of the week the results are summarized and presented to the representatives of those companies.

**Evaluation**

As all students have the opportunity to participate in R&D activities occurring within the learning process, we receive evaluations on participation through student satisfaction surveys. An important role is played by external members of final paper examining committees and the reviewers; through their opinions on completed final papers. In the case of projects associated with scholarships, student participation is evaluated by scholarship committees.

**Results**

Surveys of students who had discontinued their final papers in 2008 to 2011 indicated that students were satisfied with their supervisors. The potential graduates had good cooperating relationships with their supervisors (average assessment was 3.9 on a five-point scale).

1. During the period 2008 to 2012, the completion of twelve projects have been supported by the City of Tallinn scholarship programme.
2. During the Intensive Learning Week of 2011, four teams worked on tasks related to the SIS security testing, services offered to patients of the deaconess hospital and configuration of network connections.

3. The innovation voucher service has been provided twice. In the first case the task was to analyse and describe the monitoring software requirements for interfaces, hardware and expandability. Two students were included in the project in addition to one member of the teaching staff who acted as the leader of the project.

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Professionalism, effectiveness and the workload of supervisors are reasonably balanced, which ensures the quality of research papers and positive graduation rates</th>
</tr>
</thead>
</table>

**Implementation (policy) description**

In addition to its ordinary teaching staff, the College has developed a stable circle of final paper supervisors from outside the College. As the number of graduates is increasing each academic year, new supervisors are continually added. Alumni play an important role here. Since 2009 the College has organized seminars for new final paper supervisors to introduce underlying principles and emerging issues related to final papers. For the last two years this seminar has been entitled "From Supervisors to Supervisors". To ensure the effectiveness of supervision, the College monitors the supervision workload of the teaching staff.

If a supervisor's everyday work does not include academic activities, student-authors of final papers will also be provided with a consultant from the College who, in cooperation with the supervisor, advises the author on academic issues: format requirements for the final paper, reference-related problems, choosing and complying with methodology, suitability of reference sources, etc.

To recognize students for well written and successfully defended final papers, each defence panel nominates the best final paper of the day. At the end of the defence period the panel selects from among them the single best final paper which will be recognized with an RCUA scholarship. In 2012, based on similar selection procedures, three more authors of final papers were recognized with City of Tallinn scholarships.

**Evaluation**

Each year the process related to final papers is evaluated through feedback surveys for students who for one reason or another discontinued writing their final papers. Based on the results of feedback the process regarding the final papers will be improved; for example, in 2010 the College provided more seminars to help students in writing their final papers. Evaluation on the process is also obtained through supervisors' opinions.

**Results**

1. Since 2010, to ensure the quality of final papers, interim seminars have been held, where students introduce their R&D results and are provided with recommendations for improving their papers. Since many students realize during these seminars that their papers may require further development, only about 50% of students declaring final papers will actually present them.

2. To balance the workload related to the supervision of final papers, the College involves supervisors from companies and other higher education institutions as shown in Figure 3.3. About 15% of final papers has been supervised by the College's alumni.
3. The average number of final papers per supervisor has been between 1.5 to 1.9 in the period 2007–2012. A slight increase in the average number of final papers to be supervised during recent years has been due to the increase in graduate numbers.

**Requirement 3.3.3** Students are guided to recognize plagiarism and to avoid it

**Implementation** (policy) description
Ethics-related issues are dealt with during studies in courses such as "Social, Ethical and Professional Aspects of Information Technology" and "Software Protection (Legal Aspects)". All freshmen are introduced to the Student Code of Ethics which has been made available under the student life section on the College website. The teaching staff draws students’ attention to plagiarism-related issues in connection with written work on all subjects, and the issue is also pointed out in the College Guidelines for Student Papers. The Estonian e-Learning Development Centre (a sub-division of the EITF) started to develop a modern system of plagiarism detection in 2011; its introduction in the work of higher education institutions would allow enhancement of the quality of teaching and learning, and comparisons of final papers across different higher education institutions in a spirit of interschool cooperation.

**Evaluation**
So far the number of students has been at a level where the teaching staff are able to monitor cases of suspected plagiarism, thus the process is evaluated based on individual cases.

**Results**
1. During the period 2007–2012 plagiarism cases have not been detected in the final papers, and isolated cases of plagiarism encountered in subject-related papers have been handled in accordance with the current practice — the work by the learner is not credited and a reprimand is issued by way of a rector’s directive.

**Improvements**

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<th>Areas for improvement</th>
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<td>More systematic approach to plagiarism detection</td>
<td>Revision of the Study Regulations, Spring Semester 2013</td>
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<tr>
<td>The use of a uniform plagiarism detection system</td>
<td>Testing of the information system for plagiarism detection, in autumn 2013</td>
</tr>
<tr>
<td>Database of final paper supervisors from outside the College</td>
<td>Systematization of the database</td>
</tr>
</tbody>
</table>

Figure 3.3. Final paper supervisors, in numbers
*Source: The SIS*

3. The average number of final papers per supervisor has been between 1.5 to 1.9 in the period 2007–2012. A slight increase in the average number of final papers to be supervised during recent years has been due to the increase in graduate numbers.
4. Service to Society

4.1. Popularization of core activities of a higher education institution and its involvement in social development

| Requirement 4.1.1 | A higher education institution has a system for popularizing its core activities |

**Implementation** (policy) description

The core activity of the College is to provide ICT-related professional higher education which is popularized through marketing (requirement 1.1.6 on page 13-15).

In cooperation with the ITL, the College visits schools and participates in fairs (start it, e-skills week). Participation in the international robotics contest — Robotex — and the contribution by the teaching staff to organizing this contest (formulating competition tasks, etc.) help to popularize educational activities. To popularize professional higher education, the College has participated in various TV shows to introduce the College or to express the opinion in key issues of the field such as Internet freedom, e-services, etc.

Development activities are popularized through publications by the teaching staff, in various discussion seminars and meetings with partners (for example, introducing our distance lab to partners of the College in Finland).

Public lectures by internationally recognized information technology experts held at the College have significantly publicized the College. An overview of these lectures is provided in Figure 4.4. The systematic nature of popularization activities is enhanced by the marketing action plan. Key words under all activities include openness, social media and the extensive use of direct contacts.

**Evaluation**

Popularization activities are evaluated each year when analysing aggregate indicators of the development plan and drafting marketing plans for the following academic years.

**Results**

1. To popularize educational activities, the College maintains cooperating contacts with secondary schools. In addition to introductory events organized by the College at various schools, nine schools visited the College to get acquainted with its learning opportunities in the 2011–12 academic year.

2. The Estonian Information System’s Authority, Ministry of Foreign Affairs, Ministry of Education and Research, and Enterprise Estonia have all brought their foreign delegations to get acquainted with the College as the higher education institution providing the best IT-related professional higher education in the region. These visits have resulted in successful cooperation projects such as trainings for the public sector in Georgia.

3. Participation in teleprojects organized by the RCUA: in 2009 in the teleproject entitled "Juhtimisaju" where teams tackled problems related to internationalization of the College, and in 2011 in the TV show entitled "Kooliproov", where students of the Estonian School of Hotel and Tourism Management participated in the educational activities of the College. College employees, Andrea Corradini, Linnar Viik, Margus Ernits and others, have expressed their views on current issues (user interfaces, cybersecurity, etc.) in various TV programmes, such as Aktuaalne Kaamera Nädal, Kapital, etc.

4. In addition to research publications (Figure 3.1), the College teaching staff and students publish popular scientific articles in magazines such as Arvutimaailm [Computer World] and Digi. The College teaching staff also published articles in the A&A, a magazine issued until 2011. A visiting member of the College teaching staff was the editor-in-chief of that
magazine, and the first rector of the College was a member of the editorial board. Promotional articles about College have been published also in other magazines e.g. Life in Estonia (page 37-39 and 40-41).

| Requirement 4.1.2 | Employees of an institution of higher education participate in the activities of professional associations and, as experts, in social supervisory boards and decision-making bodies |

**Implementation (policy) description**

In cooperation with the ITL, College employees are actively involved in project discussions of the ICT Cluster, and in activities related to the Demo Centre. This participation enables us to keep abreast of the trends and directions in the IT landscape. The member of the teaching staff, Indrek Rokk, represents the College in the Estonian ICT Cluster. The College considers it important to contribute to activities related to professional standards, involving its teaching staff and the quality manager as coordinator of such activities.

The member of the College teaching staff, Truls Ringkjob, has participated in the EuroSkills competition as an expert.

In 1992 an organization joining professional higher education institutions — Estonian Rectors’ Conference of Universities of Applied Sciences — was established to participate in shaping the Estonian education policy. The College joined this organization in the 2004–2005 academic year. In 2005 the rectors of professional higher education institutions signed a declaration of quality which became the basis for a number of agreements assuring the quality of teaching and learning at professional higher education institutions.

Since 2008 the College has been a member of the Estonian Association for Quality. This membership facilitates the sharing of quality- and management-related information by means of a cooperation network and supports the development of member organizations.

Kaido Kikkas is an active member of the Estonian Internet Community which was established in 2011 to support Internet freedom in Estonia (issues related to the domain reform and Internet freedom).

**Evaluation**

Participation in cooperation networks is evaluated in the course of employee development interviews, and participation in various networks will be included in the workload of the teaching staff on the basis of their reports.

**Results**

1. **College employees in public bodies**
   a. **Jaanus Pöial** — member of the Quality Assessment Council of the Estonian Higher Education Quality Agency; member of the Association for Computing Machinery (ACM), member of the Program Committee of EuroForth; expert of the Estonian Higher Education Quality Agency for transitional evaluation in 2010–2011.
   b. **Kaido Kikkas** — Council member of the Institute of Informatics of Tallinn University; the Estonian Internet Community.
   c. **Merle Varendi** — RCUA representative in the MER working group for transitional evaluation (2008–2009); member of the quality assurance working group at the Estonian e-Learning Development Centre (since 2009); RCUA representative in the MER working group for comparing data (since 2012); College representative in the Estonian Association for Quality.
   d. **Linnar Viik** — Chair of the Board at the Open Estonia Foundation; member of the Estonian Informatics Council, the Estonian Innovation Council, and the Research and Development Council. Member of the Policy Advisory Group at the Baltic Development Forum and member of the Lisbon Council Advisory Board. Member of the Governing Board of the European Institute of Innovation and Technology.
e. Tiit Roosmaa — Council chair of the Center of Estonian Language Resources; member of the Steering Committee of the National Programme for Estonian Language Technology; national expert at the European Research Infrastructure Consortium CLARIN-ERIC

f. Raili Reimer — participates in the project in which Creative Commons concepts are translated into Estonian

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<th>Area for improvement</th>
<th>The action plan</th>
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<tr>
<td>Systemizing information related to popularization</td>
<td>To organize the database on news, spring 2013</td>
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4.2. In-service training and other educational activities for the general public

**Requirement 4.2.1**
A higher education institution has defined its objectives regarding in-service training, and measures their implementation

**Implementation** (policy) description
The College has defined its objectives related to in-service training in its development plan for 2011–2014. The focus is on combining academic studies with in-service training and increasing the provision of professional and hobby training. The goal of the Development Plan for Estonian Adult Education is to increase the number of participants in lifelong learning among people in the age range of 25–64 years. The College contributes to increasing the number of learners in lifelong learning by providing in-service training that meets the needs of society, and by offering a flexible learning system. The College also contributes to broadening the education system in general, by providing trainings for the unemployed as well as opportunities for adult learners to participate in formal education. Information about in-service trainings is disseminated by means of the College website, email lists, by involving various organizations and by a series of special events (Partner Days, Intensive Learning Weeks, etc). For example, a development project for the period 2010–2015 entitled "Practical Cybersecurity for IT Systems Administrators" provides an important opportunity to popularize in-service training. The trainings developed under this project are introduced to IT managers in the Estonian public sector who then refer employees of their own organizations to these trainings.

**Evaluation**
Indicators related to the objectives of in-service training are measured once a year and, based on the results of the subsequent analyses, the College revises its training programmes, marketing activities, etc. for the following academic years, as needed. The table of aggregate indicators of the development plan for 2011–2014 identifies the turnover indicators for in-service training. Budgets are prepared based on prior budgets and their implementation, the condition of the training market is assessed and training costs are planned on a cost basis.

**Results**
1. In 2010, as an after-effect of the economic recession, the turnover of in-service training remained significantly lower than planned, but in the last two years fiscal performance has improved significantly (Figure 4.1).
2. In 2011, 242 individuals participated in in-service training courses; 44% of participants underwent professional training, 18% hobby training and 38% cybersecurity training.

**Requirement 4.2.2**

In-service training is planned in accordance with the needs of target groups as well as with the potentials and purposes of an institution of higher education.

**Implementation (policy) description**

Provision of in-service training is based on the subjects of formal education and the needs of target groups. Trainings are conducted by the College teaching staff as well as by experts from companies and organizations of the public sector.

In-service training courses are categorized by field as follows: administration, software development, IT management, networking, graphic and layout designs, and other trainings. Based on target groups, in-service training is divided into two categories in the College training calendar:

1. Professional trainings for those who already have basic knowledge in information technology, administration, programming and software development; including cybersecurity training for the public sector and trainings funded by Töötukassa [the Estonian Unemployment Insurance Fund].

2. Hobby trainings for computer users who wish to obtain knowledge in layout and graphic designs (for example, image processing, Adobe Flash, prep courses for the state math exam).

Since 2009 the College has had a partnership with Estonian Unemployment Insurance Fund providing trainings under "training vouchers". The objective of Estonian Unemployment Insurance Fund’s training voucher programme is to help the unemployed to get back to work and to promote in-service training. In 2009–2010 the College was the project partner of Enterprise Estonia participating in the training voucher scheme. The training voucher was a grant for the specific purpose of purchasing professional in-service training, the objective of which was to enhance the competitiveness of the micro and small companies through better access to training services.

In addition to its training calendar the College also offers internal trainings based on the needs of a client. Organizations often consider internal trainings to be more effective. A number of alumni have
returned to the College through in-service trainings and subsequently recommend College in-service training courses, including internal trainings, to their employers. In addition to courses listed above, interested parties may undertake different subjects in curricula of formal education provided by the College as in-service training.
Based on the objectives, potentialities and capability of in-service training, these courses are offered at the international level as well. For example, in summer 2012 the College provided cybersecurity-related courses for IT managers of Georgian government agencies.

Evaluation
While analysing the training calendar, the feasibility and topicality of courses is being reviewed and then decided whether to continue, terminate them or launch new ones. When planning in-service training courses, the College takes into consideration the expectations of target groups and the College’s potentials (human and space resources, and competencies), and also compares its courses with the training offered by its competitors.

Results
1. The College started to provide cybersecurity-related courses at the end of 2010 and participant numbers show a growing trend (Figure 4.2).
2. In 2011 the College provided 33 in-service training courses, increasing the number to 36 in 2012 after reviewing the needs of target groups.
3. There are about four internal trainings provided each year and among the clients are organizations such as the IT and Development Centre at the Estonian Ministry of the Interior, Centre of Registers and Information Systems, the Estonian Chamber of Disabled People, Äripäev [Business Day, a media company], ADM [an e-marketing agency in Estonia], Cybernetica AS, Association of Information Technology and Telecommunications, the National Examinations and Qualifications Centre, and Enterprise Estonia.
4. There are about three to six individuals per year who join formal education courses through in-service training.
5. The College provided four courses for IT specialists of Georgian government agencies in 2012 with 15 participants in each.

| Requirement 4.2.3 | Participant satisfaction with the quality of in-service training is regularly surveyed and analysed, and the results are used in planning improvement activities |

Implementation (policy) description
After the training, participants are asked for feedback about the content of the course, satisfaction with the lecturer and administering of the training. This is a web-based survey, emailed to the participants. Feedback received will be analysed and communicated to the lecturer of that in-service training course. Based on that feedback the corresponding training programme will be revised as needed. For example, based on those analyses we have extended the training periods (academic hours), reduced the theoretical parts and increased the practical parts of training courses, and divided one training day (eight academic hours) of Business Process Modelling into two days, to allow participants to better assimilate what they had learned/heard.

Evaluation
Once a year questionnaires of feedback surveys and the subsequent analyses are reviewed to ensure the effectiveness of the feedback process, and to revise both the training programmes and the training calendar.

Results
1. Participant satisfaction with the quality of in-service training over the last three years is identified based on the cybersecurity trainings. Average results are calculated based on three criteria: assessments of meeting expectations, the instructors and the administering. The
figure below indicates that revisions of the training programmes have enhanced the quality of trainings.

![Graph showing revision enhancements in training programmes]

Figure 4.3. Satisfaction of participants of cybersecurity trainings (on a five-point scale)

Source: In-service training feedback surveys

2. Based on participant feedback, new courses will be added to the training calendar; for example, courses in software testing and Java web technologies are under development.

<table>
<thead>
<tr>
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<th>The action plan</th>
</tr>
</thead>
<tbody>
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<td>Surveying the needs of target groups of in-service training</td>
<td>To survey the representatives of target groups and revise the training calendar in Spring Semester 2013</td>
</tr>
<tr>
<td>Monitoring of new fields of training</td>
<td>To form an advisory body for in-service training</td>
</tr>
</tbody>
</table>

4.3. Other public-oriented activities

<table>
<thead>
<tr>
<th>Requirement 4.3.1</th>
<th>Public-oriented activities are purposeful, the results of the activities are periodically evaluated, and improvements are introduced based on those evaluations</th>
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</thead>
</table>

Implementation (policy) description

The College development plan highlights public-oriented activities as a crucial tool in the College's image building process and a series of public lectures serves as the most important focus in this area. In 2012 the 30th lecture was delivered in the series of lectures by recognized IT specialists on the important topics in the IT field. Most of these public lectures can be watched on the web in real time and later through the College YouTube channel.

Evaluation

The College evaluates the past events while summing up the implementation of its development plan and drafting action plans for the following year. We primarily assess the media coverage and the views of public lectures.

Results

1. Figure 4.4 provides an overview of public lectures in recent years, and all interested parties can watch video clips of the past lectures on the YouTube.
2. While providing public lectures, the College has hosted Mikko Hyppönen, a recognized computer security expert, whose topic was entitled "Recent Examples of Cybercriminal World"; U.S. Ambassador to Estonia Michael C. Polt, who gave a lecture on "Risk Management in the Internet Age"; U.S. Assistant Secretary (Bureau of Arms Control Verification and Compliance) Rose Gottemoeller and James Bach, who talked about software testing (over 22,000 views), etc.

<table>
<thead>
<tr>
<th>Requirement 4.3.2</th>
<th>A higher education institution contributes to the enhancement of community welfare by sharing its resources (library, museums, sports facilities, etc.) and/or by organising concerts, exhibitions, performances, conferences, fairs and other events</th>
</tr>
</thead>
</table>

**Implementation (policy) description**

The College contributes to the region's welfare, providing opportunities to use its facilities and computer classrooms for various Estonian and international events, in some cases it is related to sponsorships (Seedcamp, Academy, Garage48, Eneta). In addition to its facilities, the College offers technical solutions for live broadcast and simultaneous interpretation as well.

In addition to disseminating the knowledge in the IT field, the College adds to its service to society by participating in charity projects, for example the New Beginning Project in 2005–2008, in the course of which College students, under the supervision by the teaching staff, refurbished old computers and donated them to pupils with special needs. In 2011 the College again participated in a computer refurbishing project, where 50 students refurbished old computers. Resources to be replaced (mainly computers) have been given away free or sold at affordable prices to general education schools, College employees, etc.

**Evaluation**

We evaluate our contributions to enhancing the region's welfare and participation in projects, by individual event. Considering our limited resources we participate in several projects according to our capabilities.

**Results**

1. Examples of conferences held in recent years:
   a. The conference on information society — **Tark mees taskus** — in 2009 which focused on the application of information and communications technology in changed economic conditions;
   b. The **Garage 48** event in 2010;
   c. The traditional cooperation conference of professional higher education institutions combined with the innovation fair in 2010, which focused on opportunities for...
cooperation with the business sector. Guest speakers included representatives of professional higher education institutions from Finland and Austria;

d. The conference *IT spetsialistid 2013 – Eesti konkurentsii- ja eksportdivõime allikas* [IT Specialists 2013— Source of Estonia’s Competitiveness and Export Capacity] organized by the ITL in 2011, primarily focusing on topics of IT education;

e. The international conference on free software — Academy 2012 — in summer 2012 which brought about 500 free-software enthusiasts from different countries to Tallinn. The event was organized in cooperation with the Estonian Open Source and Free Software Union (ALVATAL), and the College students and teaching staff could participate in a number of workshops and practical lessons conducted during the conference.

2. In 2012 the College donated 14 computers to be replaced to the Tallinn Nõmme Basic School.