

## ASSESSMENT REPORT FOR INSTITUTIONAL ACCREDITATION

**Institution: Tallinna Tehnikakõrgkool (TTK University of Applied Sciences)**

**Assessment committee:**

**Dr Gillian Mary King** – Chair; Director, Quality in Context (UK)

**Dr Dieter Leonhard** – Rector, Hochschule Mannheim University of Applied Sciences (Germany)

**Dr Vaidotas Viliūnas** – Principal, Marijampolė's College (Lithuania)

**Mr Toomas Kuuda** – Head of Pärnu office, Estonian Chamber of Commerce and Industry (Estonia)

**Mr Martin Holm** - Student, Estonian National Defence College (Estonia)

**Coordinators:** Dr Maiki Udam, Dr Riin Seema

**Dates of the assessment visit: 11.11.–12.11.2014**

**Assessment committee sent the preliminary report to EKKA: 01.12.14**

**Assessment committee received the comments of the institution under accreditation: 19.12.2014**

**Assessment committee approved the final version of component assessment with 5 votes in favour and 0 votes against.**

**Date: 07.01.2015**

**I Summary of the assessment (mark with 'X'):**

	conforms to requirements	partially conforms to requirements	does not conform to requirements	worthy of recognition
Organisational management and performance	X			
Teaching and learning	X			
RDC	X			
Service to society	X			

**Comments:**

TTK University of Applied Sciences (TTK UAS or 'the University') became an institution of professional higher education in 1992; until that point it had been an institution of vocational secondary education. It gained its current name in 1999. It prepares students for relevant diplomas in 13 curricula under three study programme groups (Architecture and civil engineering; Machinery, manufacturing and technology; Transportation services). Graduates in some fields can gain professional accreditation. TTK UAS provides opportunities for in-service training and lifelong learning programmes. It is engaged in research, development and creative activities: its research is largely applied research. In the 2013-14 academic year there were 2,825 students, 210 academic staff and 58 support staff in the University.

The Committee found that the University has a well defined place in the Estonian higher education landscape and is making significant efforts to achieve the objectives of its Development Plan. Most of the University's strategic objectives are considered to be reasonable, although the team suggests that the University should continue to reflect on whether the ambitions of its research

objectives are appropriate and how they could be adjusted to match the University's present infrastructure and staff resources, especially in the light of government support for further research and development nationally. Planning documents and the planning process could be clearer and more consistent. The University has managed its finances prudently over a period of financial uncertainty. The Committee found a well motivated body of teachers and administrators, and students who thought the curricula that they were studying were worthwhile. The practical element of curricula is particularly valued by all stakeholders. Facilities and management systems are very good and well managed. EU Structural funds have been used to good effect. The University's through and consultative approach to developing and amending curricula is considered to be worth of recognition. The team considered that student and staff international mobility are areas for further development. Employers and other partners were very supportive of the University and considered that its role in producing middle managers and technical specialists was irreplaceable. The University has numerous links with partners of various kinds and carries out a diverse array of activities to publicise its core activities.

The Committee wishes to thank TTK UAS for its co-operation during the site visit and in preparing a helpful self-assessment report.

### **Commendations:**

- The Committee commends the University on the Study Information System which brings together several student and management functions and interfaces with the Moodle VLE and the national Estonian Education Information System. (Paragraph 25)
- The University is commended on the management and maintenance of its facilities. (Paragraph 26)
- The Committee commends the university on the number and diversity of the activities organised to publicise its activities to a wider audience. (Paragraph 73)

### **Worthy of Recognition:**

- The Committee commends the University on its thorough and consultative approach to developing new curricula and finds this area to be worthy of recognition. (Paragraph 42)

**Recommendations:**

The Committee recommends that:

- the University clarifies the relationships between its various planning documents, and clarifies the links between goals in the Development Plan, operating subsidies contract and yearly action plans so that goals are clearly traceable and can be followed through from one document to another; the Committee also recommends that this information is made accessible to all stakeholders; (Paragraph 7)
- the University continues to review the possible barriers to staff mobility with a view to enabling more staff to take up such opportunities and explores other measures of staff related internationalization such as invitations to guest lecturers or appointments of professors with a clear international profile; (Paragraph 19)
- the University reviews the possible barriers to student mobility in order that it might meet its targets to increase mobility (Paragraph 49);
- the University clarifies its RDC objectives, prioritises its goals for applied research and development, and clearly focuses on these in its Action plans. (Paragraph 61)

## II Assessment areas and sub-areas

1 ORGANISATIONAL MANAGEMENT AND PERFORMANCE
<p><b>General comments:</b></p> <p>The Committee found that all the requirements in this area are substantially met and the area <b>conforms to requirements</b>. The University has defined its Mission and role in Estonian society clearly and enjoys a high reputation amongst its stakeholders. There is a Development Plan based on the Mission and activity plans and these are monitored. While human resource management is, on the whole good, the Committee suggests that the University explore why the opportunity for sabbatical leave is rarely taken up. Financial management processes are largely effective and the University has managed its finances prudently during a period of uncertainty.</p> <p>The Committee identified two commendations and two recommendations in this area. The Committee commends the University on its Study Information System and on the management and maintenance of its facilities. The Committee makes recommendations concerning the strategic planning process and staff international mobility.</p>

1.1 General management	conforms to requirements	X	partially conforms to requirements	does not conform to requirements	worthy of recognition
<p><b>Requirements:</b></p> <p><i>A higher education institution has defined its role in the Estonian society.</i></p> <p><i>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, and that consider the country's priorities and society's expectations.</i></p> <p><i>Key results of a higher education institution have been defined.</i></p> <p><i>The leadership of a higher education institution conducts the preparation and implementation of development and action plans and includes the members and other stakeholders in this work.</i></p> <p><i>Liability at all management levels has been defined and described, and it supports the achievement of institutional purposes and the</i></p>					

*coherent performance of core processes.*

*Internal and external communications of a higher education institution (including marketing and image building) are purposeful and managed.*

1. The University's mission is "To support the sustainable development of Estonian society through applied higher education and knowledge transfer in the field of technology, primarily in engineering." Its vision is to be "a nationally valued and internationally recognised professional higher education institution in the field of technology, providing mainly engineering education". The University's core values are: "Creativity –resourcefulness, ability to create new things; Innovativeness – executing new ideas, courage, openness, flexibility; Entrepreneurship – initiative, determination, taking responsibility, execution ."
2. TTK UAS operates under the powers given to it by Statute. Its management structure includes the Rector, TTK UAS Council, the Rectorate (Rector, Vice Rector for academic Affairs, Vice Rector for Development, Finance and Managing Director, Head of Human Resources, University Lawyer), TTK UAS Management Board, TTK UAS Advisory Board, Research, Development and Creativity Council, Board of Professors, Councils of the Faculties. There is also a Student Council. There are various support units in the University: Human Resources, Financial Department, Department of Communications and Marketing, and so on.
3. The University has established a distinctive position in the Estonian HE landscape as a reputable institution of professional higher education specialising mainly in engineering. There is a strong emphasis on practical training in its curricula. It is highly regarded by its stakeholders who consider that the emphasis on practical training is very valuable in preparing students for the workplace.
4. The Development Plan is built on the mission and values of the University and is the basis for yearly University and support unit Action Plans. The Development Plan takes into account the Institutions of Professional Higher Education Act, Standard of Higher Education and other national legislation, as well as its own Statutes. The preparation of the Development Plan is inclusive, taking input from all levels in the University, and is coordinated at the highest level to take into account the needs of the country and society. The Committee found some of the objectives of the Development Plan, particularly in the field of research, to be quite ambitious. For example, its goal to be involved in contractual research work on the national and international level, or to bring about 20% growth in income through research and development work. The Committee encourages the University to regularly reflect on its goals and priorities for the research and development fields it decides to develop to ensure that they are

in keeping with its resources and capabilities.

5. While accepting that the strategic goals in the Development Plan are appropriate to the University's mission, it was not entirely clear to the Committee how these strategic goals translated into the 'Principal goals' in the 2014 Action plan which the Committee saw. It was also not clear how the Action Plan Principal goals mapped on to the goals included in the Operating Subsidies (see Section 1.3) document. Within the 2014 Action Plan it was not clear how the Principal goals mapped on to the 'Fields of activity'. The Committee, therefore, did not find it possible to follow the progress of a specific goal from Development Plan to Action plan. In none of these documents were indications of the budget needed included.
6. Performance indicators ('Measurable or definable goal-result' in the language of the 2014 Action plan) were attached to the fields of activity in the Action plan, but the Committee was told that the University also uses various indicators additional to those of the Action plan. Some of these are identified as 'critical success factors' and are reported on in the annual financial report. The Committee heard that the University reviews indicators twice a year. The Academic Board is responsible for reporting on the University's activities to the Ministry.
7. From the planning documents available to it, the Committee did not find the process of operational and strategic planning entirely transparent or easily understood. It was not clear how any particular goal was followed through from year to year, and how the University knew that strategic goals had been successfully accomplished. In order that the University can clearly monitor and report on its progress towards those goals the Committee **recommends that the University clarifies the relationships between its various planning documents, and clarifies the links between goals in the Development Plan, operating subsidies contract and yearly action plans so that goals are clearly traceable and can be followed through from one document to another; the Committee also recommends that this information is made accessible to all stakeholders.**
8. The University has a clear management hierarchy and committee structure. The responsibilities and liabilities at various levels in the University were clearly explained to the Committee. As indicated in section 4 (paragraph 72 ) the University's external communications are co-ordinated by the Department of Communications and there are Guidelines for Development of Communications and Marketing. The Committee heard from staff that communication within the University was effective and was made possible through various informal and formal channels.

<p>9. Overall TTK UAS is well organised with a clear governance structure and numerous internal regulations. Staff from all levels in the University (whom the Committee met) were aware of the need to reflect on how the core activities of the University were operating and to participate in processes which would lead to improvement. Critical reflection was evident in many aspects of the University’s operations, for example, staff performance management, regular feedback from students and other stakeholders, external involvement in curriculum development.</p>							
<b>1.2 Personnel management</b>	<b>conforms to requirements</b>	<b>X</b>	<b>partially conforms to requirements</b>		<b>does not conform to requirements</b>		<b>worthy of recognition</b>
<p><b>Requirements:</b>  <i>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.</i>  <i>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.</i>  <i>The principles of remuneration and motivation of employees are clearly defined, available to all employees, and implemented.</i>  <i>Employee satisfaction with the management, working conditions, flow of information, etc., is regularly surveyed and the results used in improvement activities.</i>  <i>Employees participate in international mobility programmes, cooperation projects, networks, etc.</i>  <i>Employees base their activities on principles of academic ethics.</i></p>							
<p>10. The Development Plan includes the following goal which relates to employee recruitment and development:</p> <p>11. “Working in all structural units of the Tallinn University of Applied Sciences will be competent and motivated employees, who consciously implement vision of the University and maintain and promote image of the University, with the share of full time members of faculty being at least 75%” .</p> <p>12. The University’s principles and procedures for employee recruitment and development reflect this goal, although the University faces some challenges in accomplishing it: competition for University academic posts is low due to the salary level which can be offered compared to those in other relevant areas of employment. Nevertheless the university is doing the best it can within its</p>							



means to ensure staff motivation. The Committee particularly acknowledges the University's commitment to:

- negotiation of starting salary level to above the minimum point to increase competitiveness in recruitment;
- flexibility in allowing staff to set personal objectives which play to their particular strengths;
- yearly appraisal of staff which leads to an apparently good interaction between staff and management and contributes to staff involvement in the University's development. The Committee heard in several meetings about modifications leading from these yearly reviews, both on a personal level and on an institutional level.

13. The university provides a positive environment for its staff, with opportunities for development and training, including studying for a Master's Degree or a PhD. The Committee gained the impression that staff concerns and opinions are listened to and that staff at all levels of management are able to share views.
14. The staff of the University told the Committee that principles of remuneration and incentivization are clear to them and were very happy with the management, working conditions, and communication within the University.
15. The Committee met a variety of staff across the age range and the self evaluation report shows a sustainable age distribution. However, more than 40% of staff are under 40. The Committee encourages the University to reflect on appropriate staff development measures to ensure personal and academic progress for all ages and in particular for this younger group.
16. The Committee heard that there is the opportunity for paid sabbatical leave but that very few staff take advantage of this. Given the importance of this opportunity for enabling staff to update skills and knowledge and carry out other activities the Committee suggest that the University investigate the reasons as to why this opportunity is not taken up and see whether they can encourage staff to make better use of it.
17. Staff surveys are carried out and the results are used as and when necessary to improve the management of the curricula, as well as infrastructure or internal processes. In this way staff satisfaction with internal information flow has improved continuously. The Committee heard examples of changes ranging from adjustments at the curriculum or module level up to the implementation of a new idea for Tech-Transfer in Civil Engineering.

18. With respect to Research, Development and Creativity objectives the Committee support the University’s findings in the SWOT analysis carried out as part of the development planning exercise. The SWOT indicates the importance for a scientific higher education institution of gaining additional teachers qualified to PhD level. The Committee considers that this will be necessary to foster scientific research, as well as a prerequisite for any future move towards offering Master’s level programmes. The Committee heard that there is an objective to have one PhD per study group, and the University may wish to consider whether it should have a more formalised plan for increasing the numbers of PhDs.

19. Although levels of staff international mobility appear somewhat low staff told the Committee about their positive experiences in such activities. The Committee recognises that the University is aware of the problem but considering that part of the University’s vision is to be internationally recognised the Committee **recommends that it continues to review the possible barriers to staff mobility with a view to enabling more staff to take up such opportunities and explores other measures of staff related internationalization such as invitations to guest lecturers or appointments of professors with a clear international profile.**

20. There is a policy on academic ethics and staff and students are aware of it. A Committee appointed by the Rector would take final decisions in cases of academic misconduct. The University’s Study Regulations contain information about the responsibilities of students to avoid academic malpractice, including plagiarism. The Committee heard that in the case of academic misconduct a process of extraordinary attestation could be invoked.

<b>1.3 Management of financial resources and infrastructure</b>	<b>conforms to requirements</b>	<b>X</b>	<b>partially conforms to requirements</b>		<b>does not conform to requirements</b>		<b>worthy of recognition</b>	
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**Requirements:**

*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).*

*A higher education institution uses information systems that support its management and the coherent performance of its core processes.*

*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.*

21. The University's approach to financial planning systematic and proportions of the three headings is well planned, but also flexible if changes are needed. Much of the investment in curricula and facilities has been possible through use of wise EU structural funding. The Committee was mindful that there was no guarantee that EU structural funding would continue at its present level in the future and suggests that the Ministry of Education and Research considers how infrastructural investment in Estonia's higher education institutions would be maintained in that eventuality.
22. This is the second year since the national changes to higher education institutional funding were implemented. The University receives a certain amount of funding from the state, conditional on meeting certain conditions set out in the operating subsidies contract. The funding is set out under three headings, including staff costs and maintenance of infrastructure, and the University can move funds between these headings with further approval from the Ministry of Education and Research. This contract sets out the minimum number of students which the University should recruit. For the calendar year 2013 this figure was set at 600. Taking into account the drop-out rate the University set a target of 645 students, and in the end 660 students were admitted.
23. The Committee notes that the University's management of its finances during a period of uncertainty when the national funding regime was changing has been very prudent. This management has led to a significant year-on-year surplus for which the University has constructive plans for use. Given the TTK UAS's prime mission to provide professional higher education instruction, the University will wish to ensure that adequate financial resources for educating students are not compromised by diverting funds to other activities. The Committee understands that the Development Plan assumes a more or less stable financial contribution from the state. The Committee suggests that the University should assess the risks of this contribution changing, in order to assess the possible effects on its core activities.
24. Despite the absence of funding from the state for its applied research the University has managed to establish a consistent income stream for its research and development activities.
25. The University's information systems are well-planned and effective and facilitate good management and coherent performance of its core processes. **The Committee commends the University on the Study Information System which brings together several student and management functions and interfaces with the Moodle VLE and the national Estonian Education**

**Information System.**

26. Staff indicated that their working conditions are good. The Committee toured the building and facilities and consider the ones that they saw to be excellent for teaching. Good use has been made of EU structural funding to upgrade facilities, for example the Computerised Numerical Control lab, and to invest in equipment, such as the body scanner. **The University is commended on the management and maintenance of its facilities.**

**2 TEACHING AND LEARNING**

**General comments:**

The Committee found that all the requirements in this area are met and the area **conforms to requirements**. Management of this area is, on the whole, very good. The Committee makes suggestions for further consideration of areas such as accessibility of University buildings, and provision of more helpful information about curricula for applicants. The Committee identified the University’s thorough and consultative approach to developing new curricula worthy of recognition.

The Committee identified one recommendation in this area, concerning student international mobility.

In this section the Committee has followed the terminology used in the SAR, where study programmes are referred to as curricula.

<b>2.1 Effectiveness of teaching and learning, and formation of the student body</b>	<b>conforms to requirements</b>	<b>X</b>	<b>partially conforms to requirements</b>		<b>does not conform to requirements</b>		<b>worthy of recognition</b>	
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**Requirements:**

*A higher education institution has defined its educational objectives and measures their implementation.*

*A higher education institution educates students so they are nationally and internationally competitive.*

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

*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.*

*Students are provided with opportunities to study at a higher education institution regardless of any special needs.*

27. The University has defined its educational goals in its Development Plan, including developing a student body that is motivated, enterprising and creative. It aims to produce graduates who are competitive in the labour market, maintain connections with the University after graduation, and who are ready to continue learning at Master's level. Yearly objectives appear in the Action Plan.
28. The University provides the necessary structures and environment to ensure that its students are nationally competitive. Graduate general employment and professional employment rates (that is, alumni who are working in the area of their qualification) during recent years were relatively high (96%, 96% and 92% general and 87%, 88% and 83% professional employment rates in 2011, 2012 and 2013 respectively). The Committee heard that one student who graduated in 2014 had won first prize in the Baltic students' Diploma papers competition in Vilnius. The TTK UAS Formula team (a group project to build a racing car) has taken prizes at various competitions.
29. The Committee heard from employers that students from the College are well placed to enter work as soon as they graduate, having the required skills and knowledge. Students also underlined that one of their reasons for studying in the University was that TTK UAS is a highly recognised institution of higher education in Estonia.
30. As far as international competitiveness is concerned the university offers opportunities for students to become internationally competitive, for example, the University is positive about exchanges, and curricula would be acceptable in other countries. However, the Committee heard no strong support for international experience from stakeholders such as employers and that student international mobility was low. Given the University's vision to be internationally recognised the Committee suggests that the University investigate whether it can offer a stronger incentive for staff and students to become internationally mobile or acquire international awareness (See also recommendations in paragraphs 19 and 49).
31. Minimum student numbers are fixed by the Operating subsidy based on needs of society as identified by the Ministry. In terms of producing a motivated student body the Committee heard several times that the first year drop out rate might be so high

because applicants realised that they had chosen the wrong program and left the university. In view of this the Committee suggests that the University examine whether it is necessary to produce more comprehensive information about its curricula for potential applicants or pre-application advice/counselling (see also paragraph 44).

32. The University provides a document outlining Conditions and Procedures for Admissions. There is an admissions analysis once a year.

33. The University aims to make necessary arrangements to give students the opportunities to study regardless of any special needs. Unfortunately the city centre building has no lift which makes it difficult for students with mobility impairment. The University has plans to continue renovation of its buildings and the Committee suggests that the University considers whether greater accessibility of the buildings can be included.

<b>2.2 Study programme development</b>	<b>conforms to requirements</b>	<b>X</b>	<b>partially conforms to requirements</b>		<b>does not conform to requirements</b>		<b>worthy of recognition</b>	<b>X</b>
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**Requirements:**

*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.*

*Development activities related to study programmes are systematic and regular, and different stakeholders are involved in the development of study programmes.*

*Graduate satisfaction with the quality of instruction and employer satisfaction with the quality and suitability to the requirements of the labor market of graduates are surveyed and analysed; the results are considered in the development of study programmes.*

34. The University’s curricula are based on the goals in its Statutes: “to offer exceptional nationally and internationally recognised instruction, conduct applied and basic research, and undertake development activities in engineering, production, construction and service-related fields of study, including environmental protection and transport services.” The curricula offered take account of the needs of the labour market, the strategies of the country and expectations of society. The University effectively involves companies in curriculum development and the development of its portfolio of programmes. The Committee heard from the Advisory Board that TTK UAS acts in quite a large network together with Tallinn University of Technology, Estonian

Union of Engineers and many companies to carry out studies and activities in accordance with the needs of the Estonian economy and industry.

35. The Committee heard from various stakeholders that the curricula prepare students to be competitive graduates. The practical component of the curricula is particularly valued. The employers whom the Committee met did not see any particular need to offer students the opportunity for Master's level study, as far as their companies were concerned.
36. The University is licensed to conduct studies in all of its curriculum areas. Curricula are reviewed every year at the Faculty level taking into account student and stakeholder feedback. More detailed reviews are undertaken every five years. New curricula may start with a market survey to determine need, and professional associations may be consulted. In one example that the Committee heard of, the University was approached by a company to develop a program to train production managers. The University decided that the first step was to define a professional standard around which the program could be designed.
37. Members of the University academic staff expressed their satisfaction concerning the opportunities to take part in professional development training, fairs and conferences: an important precondition to keep up state-of-the-art curricula.
38. Alumni are kept in contact with the University in a variety of ways, mostly informal, and had been asked to give input into curriculum evaluation. During the Committee meeting with alumni they shared their experience of upgrading or improving of the Technical Design and Technology Apparel curriculum, the Transport and Logistics curriculum, and the Civil Engineering curriculum: for example, the schedule for assessments was made more suitable for students.
39. Alumni are invited to participate in the organization of University events, related to their professional area and share their knowledge and skills with current students. TTK UAS's alumni recently established an Association for better coordination of their activities.
40. There is good contact of employers with the University. They are involved at various levels of curriculum development, for example on the Curriculum Council, Academic Board and Diploma defence committees. They pointed to examples of things that the University had changed in response to their feedback. Employers expressed the opinion that University is irreplaceable in providing specialists and middle level managers for their industries and professions.

<p>41. There is also good active representation of members of professional bodies on the Curriculum Council.</p> <p>42. <b>The Committee commends the University on its thorough and consultative approach to developing new curricula and finds this area to be worthy of recognition.</b></p>							
<b>2.3 Student academic progress and student assessment</b>	<b>conforms to requirements</b>	<b>X</b>	<b>partially conforms to requirements</b>		<b>does not conform to requirements</b>		<b>worthy of recognition</b>
<p><b>Requirements:</b>  <i>Student academic progress is monitored and supported.</i>  <i>Student assessment supports learning and is in line with learning outcomes.</i>  <i>A higher education institution has an effective system for taking account of prior learning and work experience.</i></p>							
<p>43. Student academic progress is monitored through the Student Information System. Student grades are entered on the system and the data can be interrogated and analysed.</p> <p>44. Drop-out rates at the University are high, though in line with the national average for technical curricula. The University is aware of this and concerned to reduce the rate. Indeed this an activity identified in the 2014 Action Plan. The University has analysed drop-out rate and knows that it is higher in some subject areas in the first year, and in other subject areas in the 3<sup>rd</sup> and 4<sup>th</sup> year. The Committee heard of various initiatives to reduce the rate, such as reviewing study workload, e-support, a preparatory Maths course, putting in place study advisors and a Counsellor to support students who might be in difficulties. The Committee acknowledges that some of the reasons for students dropping out may be beyond the influence of the University but encourages the university to carry on monitoring the drop-out rate to establish whether there are further possibilities to reduce it (see also paragraph 31).</p> <p>45. Learning Outcomes are clearly shown in the sample of curriculum documents which the Committee saw. In these examples, learning outcomes are set both for the whole curriculum and for individual modules, which also include the kind of assessment method involved. The University’s Study Regulations set out broadly how Learning Outcomes will be assessed. The Committee</p>							



did not see any examples of blue-printing of learning outcomes against specific assessment tasks.

46. The University aims to offer the most effective and suitable formats for student assessment. Students told the Committee that short tests at the beginning of lectures require consistent preparation and regular participation. Students noted that they accumulated their assessment “points” consistently, not postponing preparation for the last night before an exam. Students said that such methods facilitate easier understanding of new things and better thinking, as well as consecutive and more comprehensive reaching of learning outcomes.

47. There is a process for assessing prior learning which was explained clearly to the Committee and is recorded on the SIS.

<b>2.4 Support processes for learning</b>	<b>conforms to requirements</b>	<b>X</b>	<b>partially conforms to requirements</b>		<b>does not conform to requirements</b>		<b>worthy of recognition</b>	
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**Requirements:**

*The organisation of studies creates an opportunity for students to complete their studies within the standard period.  
 A higher education institution provides students with counselling related to their studies and career.  
 A higher education institution supports student international mobility.  
 Modern technical and educational technology resources are used to organise educational activities.  
 Students are periodically asked for feedback on learning and support processes (the organisation of studies, assessment, counselling, etc.); the results of surveys are taken into account in improvement activities.*

48. The University supports students so that mostly they complete their studies within the standard period, which the University considers to be within 4 years. Some students do not complete within this period for various reasons, including taking academic leave. The average time for completion is approximately 4.8 years for full-time students and 5.2 years for distance learners.

49. The University has targets for student international mobility (these are also included in the Operating Subsidy contract) and has an objective to balance incoming and outgoing student numbers. Figures for student mobility are quite low and it was not clear to the Committee what strategies the University would use to increase student mobility. The Committee **recommends that the University review the possible barriers to student mobility in order that it might meet its targets to increase mobility.**



50. Formal student support systems are few but students find their teachers and the university staff very approachable and would contact them about any difficulties. The students pointed out that in case extra tutoring, consultations or individual exam times were needed, the teachers were available to provide that. The alumni also expressed their willingness to support the university by sharing their experience of applying their educational knowledge with the students.
51. The technical and educational technology resources used to organise educational activities in the University are very good and well managed. The 2014 Action Plan contained the goal: Implementation of the Periodical Module to allow access to academic and research journals. The Committee saw this module demonstrated in the Library as part of the ESTER online catalogue.
52. Students of the University are asked for feedback on learning and support processes at defined intervals. The results of surveys are taken into account in improvement activities. When talking to the 3<sup>rd</sup> and 4<sup>th</sup> year students and the alumni the Committee learned that the suggestions made by the students concerning the study process are processed quickly by the university staff and the necessary changes are also made fairly quickly (mainly concerning curricula and the even distribution of the students' workload). The Committee found a very constructive attitude on the part of the Student Council who encouraged other students to complete feedback surveys for the benefit of future groups of students.
53. The newly implemented mandatory information retrieval training is viewed by the evaluation Committee to be a very good potential tool for the entry level students to get started with their studies; unfortunately the Committee was not able to collect enough data concerning the nature of the training to give a fair assessment concerning the structure of that training at this point.
54. There are possibilities for students to be involved in different sports activities in the University's own sport centre, to join the choir, folk dance ensemble, etc. These non-obligatory activities offer added value not seen in all institutions.
55. The Committee heard that Physical Education was a compulsory subject in Mechanical Engineering and in Transportation, and included as an option in other curricula. A maximum of 4 ECTS could be earned from PE. The University considered that skills such as team working, and working independently could be developed through PE activities.

<b>3 RESEARCH, DEVELOPMENT AND/OR OTHER CREATIVE ACTIVITY (RDC)</b>
<p><b>General comments:</b></p> <p>The Committee found that all the requirements in this area are substantially met and overall the area <b>conforms to requirements</b>. The University carries out applied research, development, and has some technology transfer activities, all of which are clearly linked to the needs of local small and medium enterprises. As an institution of professional education the University receives no state funding for research but has started to generate a funding stream for its research (see paragraph 65).</p> <p>The Committee identified one recommendation concerning the sub-area of RDC effectiveness which the Committee considered partially conforms to requirements. The Committee could not see a clear articulation of the overall objective for the University carrying out research and recommends that the University clarifies its RDC objectives, prioritises its goals for applied research and development, and clearly focuses on these in its Action plans. The Committee also suggests that the University could give some further consideration to the development of spin-off enterprises.</p>

<b>3.1 RDC effectiveness</b>	<b>conforms to requirements</b>		<b>partially conforms to requirements</b>	<b>X</b>	<b>does not conform to requirements</b>		<b>worthy of recognition</b>	
<p><b>Requirements:</b></p> <p><i>A higher education institution has defined its RDC objectives and measures their implementation.</i></p> <p><i>A higher education institution monitors the needs of society and the labour market, and considers them in planning its RDC activities.</i></p>								
<p>56. The University carries out applied research. In its Development Plan it includes the Strategic Goal:</p> <p>“...research and development activity will be integrated with instruction; involved into knowledge transfer process are beside the members of faculty, also students, who carry out applied researches basing on needs of enterprises and institutions.”</p> <p>57. One of the tasks related to this goal is: “Increasing the share of research and development activity at the University in cooperation with enterprises will bring about 20% growth in additional means, achieved by intensifying mainly of the contractual research activity of academic employees, raising the rate of work at project and invigorating of the publishing</p>								

activity.”

58. The Action Plan for 2014 gives a various principal goals for research, development and creativity (RDC), together with the intended measurable results:

- Development directions for research, development, and creative activities (RDC) and focus areas for 2015 have been defined.
- Cooperation projects with other institutions of professional higher education have been initiated, and a common understanding of RDC activities in institutions of professional higher education has been arrived at.
- Students are more actively included in RDC activities supporting instruction, through course projects, graduation theses, presentations at conferences, and publications.

The University’s guidelines on Development Directions for RDC indicate that priority growth areas will be focussed on, and that competencies to be developed will set TTK UAS apart from other universities. The Guidelines note that TTK UAS ‘has been dealing actively with contractual research work and projects in cooperation with full universities and other institutions of higher education, business enterprises, associations, local governments, and consortiums, on both a national and international level.’ Ongoing RDC activity in TTK UAS is, therefore, spread over a wide variety of projects and partners, both nationally and internationally and this may or may not be appropriate in an institution of its size.

59. In none of the documents did the Committee see a clear articulation of the overall objective for the University carrying out research. The Committee heard that the principal reasons why applied research was carried were to meet the statutory requirement on a university to carry out research, and to input to Estonia’s Research, Development and Innovation strategy.

60. The Committee heard that members of the University were free to suggest ideas for research and development projects and that that the RDC Council selected projects. The website also indicates that the Council names key research areas. However, it was not clear to the Committee how the research areas were chosen and whether there was any focussing of applied research effort as would perhaps be expected in a smaller institution, nor whether there were clear boundaries to the volume and type of applied research projects carried out. Nor was it clear to the team what safeguards were in place to ensure that the level of effort put into RDC activities did not divert resources from maintaining the quality of learning and teaching activities.

61. Without a clear objective for carrying out applied research, and clear indicators for meeting research goals, there is a risk that the University will try to respond to too many initiatives, or those that do not match its primary mission, and may divert

resources from its other core activities such as learning and teaching. The Committee therefore **recommends that the University clarifies its RDC objectives, prioritises its goals for applied research and development, and clearly focuses on these in its Action plans.**

62. The Committee noted that the University did not deliver Master’s programmes, and that a small number of staff had PhDs, and explored whether this could compromise the University’s applied research activities. The Committee heard that in carrying out its research the University aims to put together teams that include an experienced researcher, and also to include students to assist in the team as appropriate to their skills. In order to reduce competition with other institutions for research contracts the University aims to build expertise in specialisms not offered elsewhere.

63. There is a practical approach to identifying RDC activities, based on the needs of Small and Medium Enterprises (SMEs), and projects are carried out together with companies. No pure science-based and fundamental research is carried out and this is not expected in a university of applied science. In line with the recommendation above the Committee considers that RDC activities should be clearly focused, and link directly to technology transfer processes.

<b>3.2 RDC resources and support processes</b>	<b>conforms to requirements</b>	<b>X</b>	<b>partially conforms to requirements</b>		<b>does not conform to requirements</b>		<b>worthy of recognition</b>	
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**Requirements:**

*A higher education institution has an effective RDC support system.*

*A higher education institution has financial resources needed for RDC development and a strategy that supports their acquisition.*

*A higher education institution participates in different RDC networks.*

*RDC infrastructure is being updated and used effectively.*

64. Coordination of RDC activities is within the remit of the Technology Transfer Centre (TTC) which support services according to the needs of RDC projects.

65. As an institution of professional higher education the University receives no state funding for research and therefore its RDC activities are financed from other income streams in the University, such as from RDC contracts, or by inputs from the state

operating budget for teaching and management. EU structural funds have also been used to upgrade infrastructure such as laboratories. There is a strong link between applied research and curriculum activities and the same facilities are used for both areas.

66. RDC activities are largely commissioned by SMEs, and as such the RDC activities reflect the needs of society and the labour market. The University is one of only a few institutions of professional education whose research is assessed every five years by the Ministry’s evaluation system. There is good research cooperation within the Estonian Road Cluster and with National Road Administration.

67. The Committee noted that the University had set up spin-off companies and currently one spin-off operated. The Committee considers that this initiative is a positive one which helps to establish an entrepreneurial outlook in students and suggests that the University could consider developing spin-offs further.

<b>3.3 Student research supervision</b>	<b>conforms to requirements</b>	<b>X</b>	<b>partially conforms to requirements</b>		<b>does not conform to requirements</b>		<b>worthy of recognition</b>	
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**Requirements:**

*A higher education institution includes students of all academic cycles in research, creative or project activity; and systematically surveys student satisfaction with their supervision.*

*Professionalism, effectiveness and the workload of supervisors are reasonably balanced, which ensures the quality of research papers and positive graduation rates.*

*Students are guided to recognize plagiarism and to avoid it.*

68. The University prepares Level 6 Diploma level students and has no Masters or PhD provision. Students prepare graduation theses which can be based on the needs of commissioned projects from SMEs. About 90% of thesis topics are based on research problems contributed by enterprises. Student contributions to RDC activities earn ECTS credits which contribute to their curriculum.

69. There is opportunity for staff to upgrade their qualifications to Master’s and PhD. The Committee heard that staff were granted time off to work on their qualifications.

70. Staff workload is agreed on through a formal system. The Committee saw examples of workload sheets which are divided into various areas: Instruction, Activities concomitant with instruction, Managerial work, RDC activities. These areas are broken down further and staff must give the planned number of hours for each activity. One of these activities is graduation thesis advising. This information is captured on the SIS and at the end of the year the staff member must fill in the actual number of hours given to each activity.

71. The students whom the Committee met were aware of the issue of plagiarism. Information is given in the Study Regulations, and in Guidelines for Writing provided in certain subjects. Students may also consult the University lawyer. Advice about plagiarism is given in thesis seminars and a random check of theses is made. Penalties are in place for those who infringe the rules.

**4 SERVICE TO SOCIETY**

**General comments:**  
 The Committee found that all the requirements in this area are substantially met and the area **conforms to requirements**. The University has a system for popularising its core activities and carries out a wide variety of activities. The University delivers a variety of in-service training for employers and receives investment in facilities from some partners. The University has productive relationships with local schools and adds to the cultural enrichment of the area. The Committee made one commendation in this area, relating to the number and diversity of the activities organised to publicise its activities to a wider audience.

<b>4.1 Popularization of its activities and involvement in social development</b>	<b>conforms to requirements</b>	<b>X</b>	<b>partially conforms to requirements</b>		<b>does not conform to requirements</b>		<b>worthy of recognition</b>	
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**Requirements:**  
*A higher education institution has a system for popularising its core activities.  
 Employees of an institution of higher education participate in the activities of professional associations, and as experts, in other social*



*supervisory boards and decision-making bodies.*

72. The University has an effective system for popularising its core activities, which is co-ordinated by the Department of Communications, the Open University and the Technology Transfer Centre. There are Guidelines for Development of Communications and Marketing. The University is experimenting with use of social media to publicise its activities.
73. A wide variety of events are carried out to bring the University’s work to public attention: Open Days, seminars, the Technocum motorcycle project, the Student Formula project and so on. The Committee heard that 3<sup>rd</sup> year students annually organise a logistics seminar which was attended by over 200 people last year and which included overseas lecturers. Faculties hold seminars and themed meetings all year round. Although these are designed for specialists they are open to all. **The Committee commends the university on the number and diversity of the activities organised to publicise its activities to a wider audience.**
74. The University monitors and evaluates its public activities in a variety of ways: including numbers of applicants (for admissions-related activities) and amount of press and media coverage.
75. University staff participate in the activities of professional associations, and in other social supervisory boards and decision-making bodies. The Committee heard of involvement with the Estonian Road Cluster and cooperation with National Road Administration.

<b>4.2 In-service training and other educational activities for the general public</b>	<b>conforms to requirements</b>	<b>X</b>	<b>partially conforms to requirements</b>		<b>does not conform to requirements</b>		<b>worthy of recognition</b>	
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**Requirements:**  
*A higher education institution has defined the objectives regarding in-service training and measures their implementation. 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. Participant satisfaction with the quality of in-service training is regularly surveyed and the results are used in planning improvement activities.*





76. The University sets out its goals for lifelong learning in its guidance document for Lifelong Learning. Activities and expected results include:

- “finding out about the need for continuing education through key cooperation partners. Offering the opportunities for life-long education meets the demands of partners and the society.
- improvement of training related marketing, resulting in the growth of attendance at training courses.
- participates in life-long learning development projects, directed at the systemic development of continuing education and increasing the training volumes.”

77. The number of training courses offered, the number of participants, and the revenue from training have all increased over recent years and the Committee encourages the University to actively pursue these activities to see whether the volume and, therefore, revenues of such activities can be increased further.

78. The University cooperates with employers in identifying needs for in-service training and may tender for contracts, such as for training for the unemployed. However, the employers met by the Committee did not express a great wish for more in-service training and seemed to be content with the amount of training received by the students, making it possible to educate the graduates further within their companies.

79. The University carries out a variety of in-service training activities, organised by its Open University. These include running training for Toyota employees on campus, using vehicles provided by Toyota, which are therefore also available for the University’s students. Making use of the newly-acquired Computerised Numerical Control workbench teaching facilities in the Mechanical Engineering faculty also provide a good opportunity for both educating students and providing in-service training. Since many representatives of the employers met by the Committee are also active in giving input into the relevant curricula, changes in the needs for specific training can be more closely monitored and reacted to.

80. Participant satisfaction with the quality of in-service training is surveyed and the results are used to improve the quality of teaching and learning. In 2013 out of 551 respondents over 99% considered the training excellent, very good or good. Continued satisfaction of employers who commission in service training is also taken as an indication of the success of the training

provided.							
<b>4.3 Other public-oriented activities</b>	<b>conforms to requirements</b>	<b>X</b>	<b>partially conforms to requirements</b>		<b>does not conform to requirements</b>		<b>worthy of recognition</b>
<p><b>Requirements:</b>  <i>Public-oriented activities are purposeful, the results of the activities are periodically evaluated, and improvements are introduced based on those evaluations.</i>  <i>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.</i></p>							
<p>81. Public-oriented activities are coordinated by the Department of Communications and Media which plans a programme of activities annually. These are reflected in the plans of academic units. Students are involved in public-oriented events.</p> <p>82. The University allows access to the library and the sports hall to members of the public. Cultural activities within the school such as the choir, folk dancing group and acting group also help to promote the image of diversity within the university in the eyes of the general public. By being represented in seminars and conferences concerning issues on the social level and inviting such seminars to take place in the university also helps promote the image of the university as an active social institution.</p> <p>83. The University has co-operation agreements with high schools through which school pupils visit the University and University staff visit schools. ‘Fashion schools’ have also been held for local school pupils. Side-projects started by the staff or faculty (for example building drag-racing car engines or electrically powered glider engines in the laboratories of the Mechanical Engineering faculty) can be viewed as an important element in getting potential students interested in the university. Reaching out to secondary schools can be very effective. The Committee met a student who had applied to the University because of such contact.</p>							