

RE-EVALUATION OF STUDY PROGRAMME GROUPS

ASSESSMENT REPORT

INSTITUTION OF HIGHER EDUCATION: TALLINN UNIVERSITY OF TECHNOLOGY

STUDY PROGRAMME GROUP	Architecture	
STUDY		study in professional higher education
		Bachelor's study
		Master's study
	x	integrated study
		Doctoral study
STUDY PROGRAMME	Architecture	

ASSESSMENT COMMITTEE:

[Tõnu Meidla](#) (Chair) - Professor, Chair of the Higher Education Quality assessment Council (Estonia)

[Rainer Mahlamäki](#) - Architect, Lahdelma & Mahlamäki OY (Finland)

[Herman Neuckermans](#) - Professor Emeritus, KU Leuven, Department of Architecture (Belgium)

[Andres Sevtsuk](#) - Assistant Professor of Urban Planning, Harvard Graduate School of Design (USA)

[Ülar Mark](#) - Architect, Allianss Arhitektid OÜ (Estonia)

[Emma Järvenpää](#) – student, Leiden University (Holland)

PERIOD OF EVALUATION: From February to May 2016; Assessment visit: April 1, 2016

DECISION OF ASSESSMENT COMMITTEE:

COMPONENT ASSESSMENT AND CONFORMITY TO REQUIRED STANDARD:	CONFORMS TO REQUIREMENTS	PARTIALLY CONFORMS TO REQUIREMENTS	DOES NOT CONFORM TO REQUIREMENTS
Quality of conducting studies		X	
Resources		X	
Sustainability		X	
<p>Comments:</p> <p>The University currently has the right to award primary qualification, diploma architect, level 7, and the title of the programme complies with the general terminology used for qualifying the education of an architect.</p> <p>Objectives and mission of the study programme have been stated in the document “The objectives of the 5-year integrated architecture study programme ARCHITECTURE” approved by the university council on 4.12.2012. The committee was not aware of the decision and the fact was communicated later. However, the mission stated in the document is not followed in practice. Despite the fact that a document exists, its essence is not shared among the faculty and its intentions are not demonstrated by the output of the program so far. This is an important shortcoming that has led to confusion in course priorities, credits and the overall positioning of the programme in the Estonian architecture landscape.</p> <p>Another area of concern is that the department has never appointed a curriculum development committee. Students and employees are not involved in the curriculum development and a common view of the objectives of the study programme is lacking also among the teaching staff. In the comments to the report, TUT stated that the programme committee will likely be created in course of the University reform in June 2016.</p> <p>The department that fulfils the function of the curriculum development committee has partially implemented the recommendations made by the evaluation committee three years ago but some of these in a way that the committee disagrees with. Recent changes in the curriculum are conflicting with the demand of the labour market for architects with a polytechnic background and with the expectations of students and employers. Design studios are core activities of architectural education, but they should not replace <i>ex cathedra</i> comprehensive teaching devoted to the underlying theoretical principles and scientific understanding. The representatives of TUT emphasize the strong polytechnic character of the education but the student projects are similar to any other school of architecture, with only minimal creative use of technology and engineering, lack of fully elaborated technical detailing, no significant structural analysis, no equipment, no significant energy study (except for the wind tunnel test and some airflow schemes) and no physical prototyping.</p>			

A more intense structural collaboration between the departments at TUT is a prerequisite for the polytechnic approach. A collaboration between EAA and TUT for traditional fine arts subjects would lead to a more efficient and more rational use of means in both schools. Although the Estonian Ministry of Education required in 2013 that the Tallinn University of Technology must establish cooperation with the Estonian Academy of Arts in the field of architecture in order to facilitate comprehensive development and sustainability of studies, this requirement has been *de facto* ignored.

The assessment procedures are transparent, the students are generally satisfied and have the possibility to approach counsellors but have not participated in international mobility programmes, although they are informed about the possibilities. One more area of serious concern is the fact that the students are not involved in decision-making in the curriculum development of the department. The faculty's study programme committee includes three student representatives but the students at the department are unaware of this fact.

The present composition of teaching staff poorly supports the expected engineering- and technically-oriented mission of the program: there are no core faculty members with structural engineering, advanced fabrication, computation and building technology backgrounds to teach these subjects in the design studios, in combination with the creative activities. The high average age structure of core staff at the Department of Architecture and Urban Studies does not support the long-term sustainability of the programme group at TUT.

Majority of teaching staff come from professional practice but the current state of faculty research activity is very weak. There are no research positions in the Department and no successfully obtained grants. Extensive use of 'visiting contracts' points to a fundamental staff problem and lowered qualification standards used in the Department. The staff problems are clearly responsible for the stagnation of the research programme at the Department.

The committee witnessed no on-going technical or engineering oriented architectural research in the department.

The physical study environment is good and the condition of rooms and equipment suggests that substantial resources have been made available to the department. This stands in contrast to the part-time faculty positions and very marginal research money, making plans for hiring younger staff rather unrealistic. Development of the Department is primarily dependent on the TUT central budget, as the current potential of staff members to obtain funding from competitive sources is very low.

Sustainability of the TUT at large is demonstrated in figures and the number of students of architecture has been increasing, as expected for a new curriculum with a limited number of graduates.

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SENT TO THE INSTITUTION UNDER EVALUATION: April 27, 2016

RECEIVED THE COMMENTS OF THE INSTITUTION UNDER EVALUATION: May 4, 2016

ASSESSMENT COMMITTEE CONSISTING OF THE FOLLOWING MEMBERS:

Tõnu Meidla (Chair) - Professor, Chair of the Higher Education Quality assessment Council (Estonia)

Rainer Mahlamäki - Architect, Lahdelma & Mahlamäki OY (Finland)

Herman Neuckermans - Professor Emeritus, KU Leuven, Department of Architecture (Belgium)

Andres Sevtsuk - Assistant Professor of Urban Planning, Harvard Graduate School of Design (USA)

Ülar Mark - Architect, Allianss Arhitektid OÜ (Estonia)

Emma Järvenpää – student, Leiden University (Holland)

APPROVED THE FINAL VERSIONS OF COMPONENT ASSESSMENTS 6 VOTES IN FAVOUR AND 0 VOTES AGAINST: May 15, 2016

SENT TO THE QUALITY ASSESSMENT COUNCIL FOR HIGHER EDUCATION: May 15, 2016

1. ASSESSMENT OF QUALITY OF CONDUCTING STUDIES

1.1. Requirements for study programmes and learning outcomes

REQUIREMENTS	EVIDENCE GATHERED	COMMENTS

<p>A study programme is in line with the areas of activity of the educational institution based on the development plan or statutes of the institution. A study programme contributes to fulfilling the mission of the educational institution and to achieving its goals.</p>	<p>Additional information on the study programme group Institute's research development plan 2016-2019. Institute's research and development report until Nov 2015 TUT strategic plan 2011-2015 and 2016-2020, TUT comments to the draft report.</p>	<p>Objectives and mission of the study programme have been stated in the document "The objectives of the 5-year integrated architecture study programme ARCHITECTURE" approved by the university council on 4.12.2012. The committee was not aware of the decision and the fact was communicated later. However, the mission stated in the document is not followed in practice. Despite the fact that a document exists, its essence is not shared among the faculty and its intentions are not demonstrated by the output of the program so far. The evaluation committee believes this to be an important shortcoming that has led to confusion in course priorities, course credits and the overall positioning of the program in the Estonian architecture landscape.</p> <p>When asked, TUT management and industry partners suggested that the MArch program at TUT would be distinguishable for its emphasis on technical excellence, engineering subjects, collaboration with other TUT departments and industry linkages. Some of the current faculty did not mention these areas in their description of the program, highlighting the lack of a commonly adopted vision for the program.</p> <p>The contents of student works presented to the evaluation committee were very light on technology and engineering; their technical depth resembled works that come out of the Arts Academy. Since the last evaluation, the academic requirements and course credits devoted to engineering courses decreased by 30%, contradicting the presumed mission of the program.</p> <p>A uniquely distinct mission statement and curriculum for the TUT program is absolutely needed to legitimize the degree offering that pretends to offer a unique profile in Estonia. The evaluation committee believes that the mission statement should best reflect the polytechnic mission and capabilities of TUT at large and encourage much deeper emphasis in engineering, ICT, modelling, prototyping and testing as core pillars of a unique approach to architecture studies at TUT. TUT at large contains a number of departments and polytechnic study programs (e.g. structural design, mechanical engineering, environmental engineering, building production, material sciences, IT, social and economic sciences, real</p>
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		<p>estate) that would enable the university to develop a unique and technically advanced Master of Architecture curriculum, which clearly differentiates itself from Arts education. The mission should be clearly reflected in the course offerings and requirements, in student works and thesis requirement and in faculty selection and faculty research.</p> <p>At present, faculty research in the architecture program is far below the standards. The only serious research output in the form of articles and books addresses architecture history and theory topics. This work is to be commended, but the lack of any technical architectural research within the rest of the department suggests that research is currently a very low priority. The evaluation committee thinks that technical, peer-reviewed research should form a core part of a contemporary higher education program in architecture, especially within the TUT environment.</p> <p>Architectural research using the technical facilities at TUT, 3D printing, CAD/CAM milling, modelling and fabrication facilities, testing labs for structures and materials, and building physics should be prioritized in TUT architectural research. New faculty with structural engineering, energy and sustainability, design/fabrication backgrounds would much benefit the current faculty composition.</p> <p>The contract between the Estonian Ministry of Education and research and the Tallinn University of Technology signed in 2013 contains a requirement that the Tallinn University of Technology must establish cooperation with the Estonian Academy of Arts in the field of architecture studies, eventually design/fabrication, in order to facilitate comprehensive development and sustainability of studies. Although the vice rector of the TUT (prof. J. Kübarsepp) stated that TUT is planning to extend cooperation with the Estonian Academy of Arts, a new contract between the same parties that was concluded in 2016 contains the same requirement in a more demanding form (reporting date was set) demonstrating that no substantial progress could be noted over the three-year period, although TUT reported in the comments to the draft report some ongoing cooperation between the Estonian Academy of Arts and the technical departments of TUT.</p>
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		<p>A distinct mission statement of the degree programme needs to be adopted and much more ambitious teaching, research and faculty hires should be pursued – e.g. “to become the best technical architecture program in Europe”. Consideration should be given for a joint degree in architecture and structural engineering at TUT, which is profoundly lacking in Estonia.</p>
<p>A study programme takes into consideration the needs of the labour market and the target group.</p>	<p>Meetings with TTU vice-rector, dean, members of teaching staff, students and external stakeholders. Curriculum EAUI12 versions EAUI 12/15 and EAUI 12/16. Description of learning outcomes. Description of teaching staff.</p>	<p>From the interviews with people representing the profession, there appears to be a strong need coming from the labour market for architect-engineers with a polytechnic background. Recent changes in the curriculum have, however, reduced the amount of building technology (from 28 to 19 credit points) and structures from (from 10 to 6 credit points) for the year 2016/17. Members of teaching staff argued that the share of building technology and structures has increased in the studio part of the curriculum but this is not convincingly demonstrated. The respective changes are not reflected in the expertise of studio teaching faculty nor in comparative descriptions of studio learning outcomes. There are no engineering and fabrication specialists in the current core faculty.</p> <p>The evaluation committee recommends a unique studio curriculum for TUT, where studios are co-taught on an equal partnership model by architects and engineers and where student work requires the use of advanced modelling, fabrication, full-scale prototyping, testing and simulation equipment. The studios could take advantage of labs and equipment in other parts of TUT and make their use a unique aspect of studio teaching and output.</p> <p>The goals and outcomes of design studio could be evaluated in the light of designs produced by current students. These projects were not different in technical depth from those produced in non-polytechnic architecture schools. The teaching curriculum currently misses a huge opportunity of deep collaboration with other available departments at TUT.</p> <p>There is still an over-representation of arts subjects in the credit requirements of the MArch curriculum. A more rational policy is needed to intensify the collaboration with EAA for the</p>

		<p>more artistic subjects. This would allow to reduce the art subjects in the curriculum at TUT, leaving just the essential for engineer architects – sketching, freehand drawing and graphic design.</p> <p>In order to emphasize unique technical excellence in the TUT architecture program, one or two required introductory courses in computer programming should be considered.</p> <p>Technical excellence should also be reflected in urban design projects. In addition to the current volumetric and site planning investigations, students could be exposed to real-estate analysis, financial pro-formas, traffic and pedestrian flow modelling, business location analysis, and other related engineering fields that could strengthen the technical depth of urban design teaching at TUT.</p>
The title of a study programme is consistent with the content.	Curriculum EAUI12 version EAUI 12/15 Curriculum EAUI12 version EAUI 12/16	The title complies with the general terminology used for qualifying the education of an architect. Nominal duration of studies is 5 years.
The study methods used and the conduct of studies, including the load of independent work and work practice, support achievement of the objectives of the study programme.	Curriculum EAUI12 version EAUI 12/16. Meetings with teaching staff and students.	<p>The curriculum comprises courses and a graduation thesis, as well as 14% of design studio i.e. project work. The effective workload of the studio work is not monitored but the students confirm that it outreaches the hours specified in the programme.</p> <p>The study methods in the architecture program currently do not sufficiently take advantage of the technical expertise and available facilities at TUT. Some of the provided equipment is not even used by students because of the costs. The committee recommends a more extensive use of digital fabrication equipment (model making, 3d printing, CNC and CAD/CAM machinery; robotic arms); use of large-scale prototyping and mock-up construction; use of testing and analysis labs as part of architecture courses and studios.</p>

The objectives and learning outcomes of a study programme are formulated in such a way that they provide a basis for evaluation of the knowledge and skills of graduates of that study programme.	Standard-of-Higher-Education. Portfolios of the design studio.	The objectives and learning outcomes provide a sufficient basis for evaluation of the knowledge and skills of graduates.
The objectives and learning outcomes of a study programme are equal and comparable to the learning outcomes of a given cycle of higher education described in Annex 1 to the Standard of Higher Education.	Description of learning outcomes	The objectives and learning outcomes are comparable to the learning outcomes of higher education described in Annex 1 to the Standard of Higher Education.
The objectives and learning outcomes of a study programme meet the requirements and trends of international legislation that regulate the professional field.	Directive 2013/55/EC	<p>The programme complies with the directive 2013/55/EU in terms of objectives and learning outcomes listed in the 11 points and Annex 1 from the Directive.</p> <p>However, in order to adequately justify the addition of a new MArch degree program to the relatively small Estonian architecture landscape, the committee strongly encourages TUT to set the mission and goals of the architecture program much higher than fulfilling existing regulations and to develop and internationally leading, technically oriented architecture program.</p>

<p>If a professional standard exists, the objectives and learning outcomes of a study programme take into consideration the acquisition and implementation of the knowledge and skills described therein.</p>	<p>Professional standard of a diploma architect, level 7 - http://www.kutsekoda.ee/et/kutseregister/kutsestandardid/10440735, 'General requirements to the medical, veterinary, pharmacy, dentistry, midwives, nursing, architectural and engineering studies' (Government Decree, Estonia) in Riigi Teataja (https://www.riigiteataja.ee/akt/811216)</p>	<p>The University currently has the right to award primary qualification, diploma architect, level 7.</p> <p>A number of industry representatives expressed a view that the TUT MArch program would be producing technically grounded graduates with strong engineering, fabrication, construction and design skills. The present curriculum and student thesis work do not reflect this vision.</p>
<p>Work practice that is necessary for achievement of learning outcomes leads students toward acquiring and implementing efficient work methods.</p>	<p>Directive 2013/55/EU. Work practice reports presented by the institution.</p>	<p>The directive 2013/55/EU requires 4 years of study devoted to architecture followed by 2 years of internship before registration as an architect OR 5years of full-time study OR 300 ECTS. The student interviewed all were involved in real practice during studies.</p> <p>A great number of students appear to be working full time during studies, which is poses a serious concern towards their ability to fully follow and focus on course work. TUT should monitor and coordinate the load and content of work that enrolled students are allowed to engage in during semesters. Internships should ideally be reserved for summers and non-academic periods.</p>
<p>Organisation of work practice is clearly regulated. The instructions for work practice are available and</p>	<p>Additional information on the study programme group, work practice reports, TUT comments to the draft report.</p>	<p>Students get credits after assessment by staff in school, evaluated case by case, some via jury. The internship is planned to take place after the fourth study year but presented work practice reports from the students who were accepted for the 4th year of the programme (almost half of the group in 2014 and 2015) do not show work practice as a regulated and formal process aimed at reaching learning goals. Evaluation of work performed in</p>

the supervision of students in work environment is ensured. The requirements for the completion of work practice are determined.		professional practice appears ad hoc, no clear guidelines for evaluation learning outcomes were presented. The description of goals and results is very generic or missing and some reports document person's professional activities over a long-term period (over 10 years), which are clearly irrelevant to the short-time work practice during the study programme.
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<u>1.1. Requirements for study programmes and learning outcomes</u> <u>- ASSESSMENT SUMMARY</u>	Conforms to requirements	Partially conforms to requirements X	Does not conform to requirements
<p><u>Justification:</u></p> <p>The title of the programme complies with the general terminology used for qualifying the education of an architect but the lack of an agreed-upon mission and character of the program is an important shortcoming that has led to confusion in course priorities, credits and the overall positioning of the program in the Estonian architecture landscape.</p> <p>Although there is a strong need coming from the labour market for architect-engineers with a polytechnic background, the recent changes in the curriculum have reduced the amount of building technology and structures and student projects as well as faculty research do not demonstrate a strong emphasis on engineering or technology. In comments to the draft report, TUT stated that several engineering and technical basic and main subjects have been integrated into the specialty projects. The opinion of the committee is that these topics can not be entirely moved to the black box of studio, but should also be retained as specialized subjects.</p> <p>The objectives and learning outcomes are comparable to the learning outcomes of higher education but the study methods currently do not sufficiently take advantage of the technical expertise and available facilities at TUT.</p>			

1.2. Study programme development and requirements for teaching staff

REQUIREMENTS	EVIDENCE GATHERED	COMMENTS
Study programme development is a continuous process.	Meetings with members of teaching staff, curriculum EAU12 versions EAU1 12/15 and 12/16.	The committee was presented 2 versions of the curriculum, one for 15/16 and one for 16/17. However, the department has never appointed a clear curriculum development committee and the members of teaching staff were unaware of the standard procedures of making changes to the programme. We recommend that the department adopt a formal curriculum development committee, which includes representatives from faculty, students as well as TUT management.
Study programme development involves students and employers.	Meetings with students and external stakeholders.	There is no programme committee and students are not involved in changing the programme, although they can give feedback to individual course instructors. Employers are formally involved, only insofar as many of the visiting staff employ students themselves in their professional firms. External stakeholders were poorly informed about the curriculum and, in particular, about the recent reduction in required engineering course credits in the curriculum.
Members of the teaching staff are aware of the objectives of a study programme and of their role in achieving these objectives.	Meeting with members of teaching staff.	Members of the teaching staff failed to demonstrate that a common view of the objectives of study programme has been adopted and that they have an active role in achieving these objectives. Interviews were not convincing in this respect.
An action plan to eliminate deficiencies of study programmes that have received a temporary right to conduct studies has	Additional information on the study programme group, curriculum EAU12 versions EAU1 12/15 and 12/16.	The department has partially implemented the recommendations made by the evaluation committee 3 years ago. Some of these recommendations were implemented in the curriculum for the year 2016/17 in a way that the committee is disagreeing with, because it is obscuring the intended profile of the architecture study program. The school reacted to the previous assessment recommendations by reducing the credits devoted to sociology and art subjects by 8 credits; by increasing the credits for the design studio from 32 to 42 credits;

been drawn and it is being implemented.		by increasing with 10 credits the share of urban planning and its studio in the curriculum and by reducing the credits for building technology and structures (see above). The assessment committee does not agree with this reorientation because it takes the program further away from its legitimization as a technically oriented architecture program
A feedback system (involving students, graduates, employers, teaching staff) is effective and its results are applied.	Meetings with students, employers and members of teaching staff.	<p>The members of teaching staff did not report the availability of an integrated feedback system or routines of handling feedback. They mentioned informal feedback only. The present lack of a formal programme development committee makes a formal handling of feedback difficult. In comments to the draft report, TUT mentioned an official and complete feedback procedure, which includes different target groups but the staff was unaware of this procedure.</p> <p>The students give mandatory feedback on at least four courses and the results are published, but the students are not asked to give feedback to the entire programme nor participate in strategic curriculum development decisions. They are neither aware of the results of the feedback nor how their feedback is used to develop the study programme.</p> <p>Industry representatives and employers were unaware of a formal feedback system and were never asked for feedback to the programme, although some of them are regularly involved in evaluation of graduation works.</p>
Qualifications of the teaching staff of a study programme group meet the requirements established in legislation as well as those arising from <u>the specifics of the study programme group</u> .	Overview and examples of creative activity of teaching staff, web page of the Department of Architecture and Urban Studies,	<p>Full time or nearly full time staff members have PhDs whilst visiting part-time or contracted practitioners, who teach a high number of courses and design studios have no PhDs. The latter do have significant practical experience.</p> <p>The current permanent staff in the department have traditional backgrounds (most graduated from the Estonian Academy of Arts) and have not the polytechnical background needed for the declared polytechnic education in architecture.</p> <p>The assessment committee is convinced that inviting polytechnic staff 'à la carte' into individual courses is not sufficient for bringing the polytechnic ambition of the program into</p>

		life. Core faculty with structural engineering, advanced fabrication/construction and computational design/analysis backgrounds are needed within the department. More ambitious, technically grounded leadership with strong cross-disciplinary skills is also needed for a polytechnically oriented program to flourish.
Members of the teaching staff have an adequate teaching competency.	Meetings with the members of teaching staff and students. Examples of creative activity of teaching staff.	Majority of teaching staff come from professional practice. They are experienced in teaching design studios, but more staff capacity is needed to teach engineering subjects. The students did not complain about the quality of lectures and studios. Students exhibited some appeal towards more technical architectural subjects, such as programming, fabrication, modelling.
Members of the teaching staff participate in research and development (including applied research).	Meeting with teaching staff, creative activity of teaching staff, departmental research and development report until Nov 2015, and the development plan for 2016-2019. Additional information on the study programme group.	R&D activities are weak on a number of fronts: in the proportion of staff involved; in grant or industry funding; and in publications output (except for one PhD student); and in research focus-areas unique to TUT. No engineering or technically oriented architectural research output was witnessed except the ones dating from the now abolished engineering graphics unit. Architectural research was dominated by history and theory. Compared to international standards, the research activity in the department is very weak, containing almost no publications in category A (SCI journals), it is mostly local (in Estonian) and not featured in top publications. The department's current partner institutions are mostly at the (former) <i>Fachhochschule</i> level. Third party financing is marginal. The number of research staff does not conform to academic research standards. The respective recommendations of the previous evaluation (to develop an architecture and urbanism research agenda for the programme; to guarantee at least 15% full-time architecture faculty at TUT, whose work obligations include targets for architectural research; to develop a clear financing model for funding architecture and urbanism research in the long run) have been <i>de facto</i> ignored.

Members of the teaching staff cooperate with stakeholders of the study programme group outside the educational institution (employers, professional and trade associations, higher education institutions conducting studies in the same study programme group and other institutions of research and development).	Meetings with teaching staff and students, Institute's research development plan 2016-2019.	Majority of teaching staff also practice in their own architectural offices. Intention to collaborate with the Estonian Academy of Arts was mentioned in the development plan of the department but no evidence of cooperation could be provided by the members of teaching staff and students. Contacts to professional organizations are limited.
The staff development system is effective: members of the teaching staff have opportunities for self-improvement and self-development, regular development interviews are conducted and/or other staff development methods are applied.	Institute's research development plan 2016-2019, meeting with teaching staff.	Plans have been made for the improvement of supporting the members of the teaching staff with opportunities for self-development. However, there is no tradition of regular development interviews with the members of teaching staff nor indication of any kind of formal reporting.

Visiting members of the teaching staff (including from foreign institutions of higher education) are involved in conducting studies in a study programme group.	Overview of teaching staff, meeting with teaching staff and students.	Visiting members of the teaching staff are invited studio teachers and offer numerous courses.
Members of the teaching staff of an educational institution (in the field of study of a given study programme group) regularly further their skills at foreign institutions of higher education and participate in high-level conferences.	Meeting with teaching staff, examples of creative activity of teaching staff, additional information on the study programme group.	Some teachers have international contacts, especially via European architecture program. Regular academic and research interactions are hampered by the fact that majority of the teaching staff are involved in architectural offices.

<u>1.2. Study programme development and requirements for teaching staff</u> <u>- ASSESSMENT SUMMARY</u>	Conforms to requirements	Partially conforms to requirements	Does not conform to requirements X
<u>Justification:</u> <p>The department has never appointed a curriculum development committee and students and employees are not involved in the curriculum development.</p> <p>Members of the teaching staff failed to demonstrate that a common view of the objectives of study programme is communicated to them and did not report the availability of an integrated feedback.</p>			

The department has partially implemented the recommendations made by the evaluation committee 3 years ago but some of these in a way that the committee is disagreeing with.

Majority of teaching staff come from professional practice but the faculty currently exhibit a notable lack in engineering and construction technology competency. Compared to international standards, the research activity in the department is very weak.

1.3. Students

REQUIREMENTS	EVIDENCE GATHERED	COMMENTS
The entrance requirements for student applicants are based on qualities necessary for achievement of learning outcomes of a given study programme.	TUT admission rules November 2015 Meeting with teaching staff, TUT comments to the draft report.	The assessment committee was provided with the general admission requirements for the TUT (document 'TUT admission rules'). The entrance requirements of students applying to the architecture study programme are based on the state exams and special tests: writing an essay and participating in two-day tests in drawing and composition. The applications for the 4th course are accepted from people who have a Bachelor's degree or an applied architecture diploma, they have to submit the diploma supplement and portfolio. The question if the entrance requirements are based on qualities necessary for achievement of learning outcomes was not properly answered by the teaching staff.
The counselling system of students (study, career, psychological counselling) is effective.	Additional information on the study programme group Meeting with students.	<p>The TUT provides a university-wide counselling system for students. A great number of counsellors are available for different issues (for study, career, scholarship and international studies etc.). In addition, the Department of Architecture and Urban Studies has two administrative employees: the secretary and the administrative assistant, whose duties include also student counselling.</p> <p>During the meeting with students, it appeared that the counselling system at the department is effective but informal. The students approach the Head of Department (Prof. Irina Raud) in most cases. It was explained that the primary reason for this is the small size of the department and the shared 'family feeling'. Although both the students and staff members are very positive in this respect, the sustainability of this counselling practice is not likely as the total number of students reaches over 70 and this will put too much pressure on teaching staff. The staff members did not mention efforts of creating a professional and formal counselling system in the department that is located far away of the main campus.</p>
Student assessment supports learning and is in line with learning	Meeting with academic staff, Meeting with students, Example of the assessment	Students' studio projects are regularly evaluated by the academic staff, and weekly feedback is provided to all students. Each work/project is continuously evaluated since the beginning of project work. If the quality of student's work does not fulfil the requirements of the

outcomes.	protocol.	<p>course, the student is not allowed to finish his/her work until the required changes have been introduced. The students say that this continuous monitoring is even more important than the final assessment.</p> <p>In case that students face problems with their studies or projects, the academic staff is easily reachable in a short notice (e.g. by email).</p>
Students participate in international mobility programmes. The percentage of students participating in student mobility is growing.	Additional information on the study programme group Meetings with academic staff, stakeholders and students.	<p>The students have not participated in mobility programmes, although they are regularly informed about the possibilities of international exchange, i. a. via email and by professors during the class.</p> <p>The department of architecture is planning to improve the situation by establishing the Erasmus cooperation ties with some foreign universities (Polytechnic University of Valencia, Spain - ranked #601-650 in QS World University Rankings® 2015/16, University of Art and Design Linz, Austria – no ranking in 2015/16). These contacts may not be too stimulating as the Tallinn University of Technology (ranked #601-650 in QS World University Rankings® 2015/16).</p> <p>Students have taken part in international student competitions, such as the ones organised by ISOVER (Isover- Multi-Comfort House Student Contest), as stated in the document 'Additional Information' (p. 1) and mentioned during the meeting with different parties.</p>
The educational institution recognises prior learning and work experience.	Assessment report 2013Example of a table evaluating the former studies against the curriculum of architecture.	The university has formal rules of recognizing prior learning and work experience and they are valid for the Department of Architecture and Urban Planning. An example form of recognition of prior learning and work experience was provided to the re-evaluation committee. The recognition of previous learning and work experience at the Department is performed by the staff members, there is no special committee.
Students are involved in the decision making	Meeting with academic staff Meeting with students.	Both the staff and students confirm that students are not involved in any decision making. During the meeting it further appeared that students were not aware of the recent changes

process at different levels of the educational institution.	Curriculum EAUI12 versions EAUI 12/15 and 12/16.	made in the curriculum. This is rather alarming, as the recent changes (substantial cuts of the engineering part in the programme) lower the programme's potential to fulfil their expectations – getting the architecture education with a strong engineering component. The students expressed their need for more computer programming courses in the curriculum.
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<u>1.3. Students – ASSESSMENT SUMMARY</u>	Conforms to requirements	Partially conforms to requirements	Does not conform to requirements
<p><u>Justification:</u></p> <p>The department of Architecture and Urban Studies is new and several aspects are still to be arranged. A part of the requirements and relevant documentation is covered by the institutional (TUT) resources but there are also serious issues to consider.</p> <p>The assessment procedures are clear and effective, the communication between the teaching staff and students well established. The students have the possibility to approach counsellors from both the Department of Architecture and Urban Studies and in the main campus of TUT (the university-wide counselling system) but solving issues within the department need to be re-organized.</p> <p>The students have not participated in the mobility programmes, although they regularly informed about the possibilities. The department has made plans to improve the situation.</p> <p>The entrance requirements of students applying to the architecture study programme are based on the state exams and special tests: writing an essay and participating in two-day tests in drawing and composition. The applications for the 4th course are accepted from people who have a Bachelor's degree or an applied architecture diploma, they have to submit the diploma supplement and portfolio.</p> <p>A remarkable number of students are regularly accepted to the fourth year, based on recognition of prior learning and work experience of potential students.</p>			

The question if the entrance requirements are based on qualities necessary for achievement of learning outcomes was not properly answered by the teaching staff.

One of the main concerns of the assessment committee arisen during the visit is the fact that the students are not involved in decision-making in the department or regarding the curriculum. They are obliged to give feedback on teaching on regular basis but are neither aware of the results of the feedback nor how it is used to develop the study programme. At the same time, there are problems that need to be resolved, for example, during the meeting with the assessment committee the students expressed their need for more programming classes in the curriculum.

1. <u>QUALITY OF CONDUCTING STUDIES - ASSESSMENT SUMMARY</u>	Conforms to requirements	Partially conforms to requirements X	Does not conform to requirements
<p><u>Justification:</u></p> <p>The University currently has the right to to award primary qualification, diploma architect, level 7, and the title of the programme complies with the general terminology used for qualifying the education of an architect. The lack of an agreed-upon mission and character of the program is an important shortcoming that has led to confusion in course priorities, credits and the overall positioning of the program in the Estonian architecture landscape. The recent developments of the curriculum are conflicting with the demand of the labour market for architects with a polytechnic background and with the expectations of students and employers.</p> <p>The department has never appointed a curriculum development committee, students and employees are not involved in the curriculum development and a common view of the objectives of study programme is lacking among the teaching staff.</p> <p>The department has partially implemented the recommendations made by the evaluation committee 3 years ago but some of these in a way that the committee is disagreeing with.</p> <p>Majority of teaching staff come from professional practice but the faculty currently exhibit a notable lack in engineering and construction technology competency and very weak research activity.</p> <p>The assessment procedures are transparent and the students have the possibility to approach counsellors but they have not participated in the</p>			

mobility programmes, although they regularly informed about the possibilities.

One of the main concerns of the assessment committee arisen during the visit is the fact that the students are not involved in decision-making in the department or regarding the curriculum.

2. ASSESSMENT OF RESOURCES NECESSARY FOR CONDUCTING STUDIES

2.1. Requirements for teaching staff

REQUIREMENTS	EVIDENCE GATHERED	COMMENTS
The number of ordinary teaching and research staff who comply with the qualification requirements that are established by legislation and arise from the specifics of a study programme group (based on their responsibilities, the volume of conducted studies and the number of supervised students) is adequate for achieving the objectives and learning outcomes of study programmes in a given study programme group.	Description of teaching staff, examples of creative activity of teaching staff, institute's research development plan 2016-2019, meeting with teaching staff.	<p>A limited number of people hold regular contracts and there are very few full-time contracts. Most of the members of the Department are considered visiting staff. The members of teaching staff explained the part-time employment situation with professional activities (most people work in architectural offices) but also with a shortage of finances.</p> <p>Majority of the specialization courses (more than 1/3 of the total amount of the programme) are taught by the visiting staff. The members of teaching staff explained that visiting staff are professionals, some of them high-level specialists, who were nominated to the 'visiting positions' as they do not fully conform the requirements of academic staff at TUT. The qualifications problems have given rise to a very weak publication record and very limited research portfolio, whilst professional experience of staff members in the field of the programme could not be questioned.</p> <p>A large share of courses (more than 15%) are taught on the basis of authorisation agreements.</p> <p>Lecturers for 13 subjects are not shown in the material provided to the re-evaluation committee. There are no research staff listed in the Department.</p> <p>Of the nine members of permanent and visiting teaching staff listed in the departmental web-page, only three people have PhD's.</p> <p>Considering the above, the number of ordinary teaching staff is at or below the lowest reasonable limit.</p>

		<p>The number of PhD holders among permanent and visiting staff is too low.</p> <p>The present teaching staff composition does not clearly support the engineering oriented and technically oriented mission of the program. The program leaders and teachers emphasize a more polytechnic orientation of the design studios in the new version of the curriculum but the core faculty members who teach at the studios are lacking the structural engineering, advanced fabrication, computation and building technology backgrounds.</p> <p>Future plans are made to improve the situation.</p>
<p>Distribution of teaching staff by age and the percentage of young members of the teaching staff ensure the sustainability of studies in an educational institution and in a study programme group.</p>	<p>Teaching staff TUT strategic plan 2011-2015 Institute's research development plan 2016-2019</p>	<p>The average age of the teaching staff is 54. The number of younger staff members is rather small; only 9 members from the total of 51 people involved in teaching of various (general, architecture- and engineering-related) subjects are under 40.</p> <p>There are 10 regular and visiting staff members in the Department, six of them in the age between 50 and 60, two between 60 and 70 and two over 70. These people together cover half of the curriculum and absolute majority of the architectural subjects.</p> <p>The age structure of core staff at the Department of Architecture and Urban Studies does not support the long-term sustainability of this programme at TUT.</p> <p>Although the faculty leadership does not emphasize the staff problem, the overall goal to contribute to lowering the average age of academic staff has been set in TUT since 2013. The Department of Architecture and Urban Studies has set the overall goal for 2016-19 to involve PhD students in research projects and in teaching, although no numeric indicators were provided.</p>

2.1. Requirements for teaching staff - ASSESSMENT SUMMARY	Conforms to requirements	Partially conforms to requirements X	Does not conform to requirements
<p>Justification:</p> <p>The number of ordinary and visiting teaching staff together is at or below the lowest reasonable limit and the number of PhD holders too low, although most teaching staff are qualified professionals. There are no research positions in the Department. Extensive use of 'visiting contracts' points to a fundamental staff problem and lowered qualification standards used in the Department.</p> <p>Various staff problems are clearly responsible for the stagnation of the research programme at the Department. The present teaching staff composition does not clearly support the engineering oriented and technically oriented mission of the program. There are no core faculty members with structural engineering, advanced fabrication, computation and building technology backgrounds, making the proclaimed mission of the TUT program questionable.</p> <p>The age structure of core staff at the Department of Architecture and Urban Studies does not convince in sustainability of studies in this programme group at TUT.</p>			

2.2. Financial resources of an educational institution

REQUIREMENTS	EVIDENCE GATHERED	COMMENTS
The financial resources of an educational institution are adequate for conducting studies.	Visit to the Department, meeting with teaching staff and students, departmental research and development report until Nov 2015.	<p>The departmental budget could not be provided but some indirect indication suggests that substantial resources are available for conducting studies. The department is fully renovated and well-equipped. The ongoing renovation project will make more space available in future.</p> <p>Some other indication is still pointing at shortage of resources. The part-time positions of several staff members are explained with limited finances. The fact that students have to pay use for use of some equipment and are not fully satisfied with the library is another indication of likely shortage financing.</p>

		The research money of the Department is very marginal.
The financial resources of an educational institution are adequate for teaching staff development and for development activities related to studies.	Visit to the Department, meeting with teaching staff and students, departmental research and development report until Nov 2015.	<p>No plans to develop the skills and competencies of the staff were provided. Adequacy of the resources for staff development could therefore not be evaluated properly. Application of part-time contracts could be taken as indirect indication that teaching staff could not be increased.</p> <p>The teaching could gain remarkable support from research activities and research staff but the research money at the Department is clearly insufficient for establishing research positions. Low number of staff with PhDs and very limited publication record of absolute majority of staff members makes the probability of increasing the research money in near future very low.</p>
Financial data describing the economic sustainability are made available to the public.	Financial reports and other related documents in TUT website.	Annual reports of the institution are published in the institutional website. TUT is the second-largest public university in Estonia and gets remarkable funds from the governmental budget, R&D contracts and tuition fees.
Annual reports of an educational institution or its manager are audited, unless otherwise provided by law.	Financial reports and other related documents in TUT website.	Annual reports of the institution are published in the institutional website.

<u>2.2. Financial resources – SUMMARY ASSESSMENT</u>	Conforms to requirements	Partially conforms to requirements X	Does not conform to requirements
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Justification:

Although the condition of rooms and equipment suggests that substantial resources are made available to the department, the part-time positions and very marginal research money are pointing at shortage of resources, especially considering the plans for hiring younger staff members and increasing the research activities. Developments in this field are likely dependent on the central budget, the fundraising potential of the staff members is very low.

2.3. Study environment of an educational institution

REQUIREMENTS	EVIDENCE GATHERED	COMMENTS
The study environment includes all premises necessary for conducting studies (auditoriums, seminar rooms, laboratories, rooms for students for independent work and recreation, etc.) and is of adequate capacity considering the number of students.	Assessment report 2013 Additional information on the study programme group Visit at the department Meeting with students.	<p>All necessary premises for conducting studies (lecture halls, laboratories, seminar rooms, rooms for students' independent work, library for research etc.) are available. The studies are conducted at two locations: at the departmental premises (Tõnismägi 14) and at the TUT campus in Mustamäe, located at a considerable distance.</p> <p>The premises of the Department of Architecture and Urban Studies are located at two floors (4th floor and roof floor) in the building 14, Tõnismägi Str. The classrooms at the 4th floor are adequate for 20 students (the number of students annually admitted to the 1st year of the programme), but problems will arise in near future as the real admission is almost the double (2014 – 37, 2015 -35). A number of students were taken to the fourth year based on the recognition of former studies and work experience. From September 2016 on some of the groups will grow larger if a bigger number of students will be admitted, which might cause overpopulation in some classrooms.</p> <p>Many changes have been made to improve the study environment since the last evaluation. The reconstruction of the roof floor, finished in 2015, created a new space for studies. The new roof floor includes a studio room for 50 persons, modelling room, meeting room and a small kitchen, all of open planning. A new staircase and elevator were completed in 2016, enabling access for disabled students. In 2016 the construction work will continue in a former water tower connected to the building. Two lecture rooms, exhibition areas and a public architectural gallery in the first floor will be established. Since the water tower is a</p>

		<p>historical monument, certain limitations must be considered in the construction process, making this reconstruction work a real challenge.</p> <p>At the second location, the Faculty of Civil Engineering at the TUT main campus, the students can use a drawing and painting studio, a computer classrooms and laboratories. TUT further provides basic facilities (e.g. library and equipments such as 3D printer and water-jet cutter).</p> <p>Students had no complains about the current study environment, expressing only a wish of getting access to the department after the normal working hours.</p> <p>The available softwares for students are: Autodesk products (Autocad, Revit, 3D MAX), Grapfisoft products (Archicad, Artlantis Studio, MEP Modeler), EcoDesigner STAR, Tekla BIMsight, Solibri Model Viewer, and trial versions of Adobe software (Photoshop, Illustrator, Indesign) Rhinoceros + plugins.</p> <p>Students mentioned their wish for better 3D modelling software.</p>
Study environment is furnished in conformity with contemporary requirements (video projectors, the Internet, etc.).	Additional information on the study programme group Visit at the department. Meeting with the students	<p>Modern equipment (computers, touch-screens, the Internet and wifi connections) and furniture suitable for architectural studies are available.</p> <p>For using some equipments, such as the 3D printer, students must cover the material costs. In some cases similar equipments can be used with a lower cost elsewhere.</p>

<p>The conduct of studies and the activities of an educational institution are supported by contemporary information technology solutions, including the information system of studies, e-learning opportunities, and communication portals for students and teaching staff.</p>	<p>Additional information on the study programme group Meeting with students</p>	<p>Students and teaching staff are provided with contemporary information technology solutions needed for studies and communication.</p> <p>The following systems are in use:</p> <ul style="list-style-type: none"> - Information system ÕIS – the study information system for the teaching staff and students (see also the next field). - Oracle Collaboration Suite - a teamwork environment for students (incl. e-mail, calendar and file sharing). - Remote work (VPN channel) - for establishing a secure connection to the TUT network, for students and employees. - SAIS –the national electronical application system used for the admission of new students. <p>For technical solutions of e–learning opportunities, see the last part of the 2.3.</p>
<p>Support services that support studies provide counselling for students and ensure the necessary document management.</p>	<p>Additional information on the study programme group Meeting with students</p>	<p>The information system ÕIS covers all the information related to studies and allows the students to declare and compile the individual study plans, register for the exams, apply for study allowances and submit other applications, provide feedback on lecturers etc. by electronic means.</p>
<p>A library that ensures the availability of contemporary information sources and provides students with the opportunities for independent work.</p>	<p>Additional information on the study programme group Website of TUT</p>	<p>The library ensures the availability of contemporary information sources. The students have access to several e-journals and e-books for e-learning, factual databases, reference databases and citation databases. Other important innovative technological services related to teaching include online information services, the online catalogue ESTER, the digital collection of the publications of TUT, databases of research articles, information literacy training (web-based distance learning courses), e-journals search system EBSCO A-to-Z, dynamic linking of meta search and online resources.</p>

		<p>The students are not fully satisfied with the availability of publications on architecture in the library.</p> <p>The assessment committee did not visit the library, but the information provided on the website of the TUT suggests that the building offers sufficient space for independent work of students.</p>
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<u>2.3. Study environment – ASSESSMENT SUMMARY</u>	Conforms to requirements X	Partially conforms to requirements	Does not conform to requirements
<p><u>Justification:</u></p> <p>The study environment generally fulfils the needs of students and provides the necessary equipment for conducting studies. Minor issues mentioned by the students were the limited access to the Department, limited availability of architectural publications in the library of the main campus and too expensive use of some equipment provided by the TUT.</p> <p>The software is generally adequate, only the 3D modelling programs could be improved.</p>			

<u>2. ASSESSMENT OF RESOURCES NECESSARY FOR CONDUCTING STUDIES</u> <u>- ASSESSMENT SUMMARY</u>	Conforms to requirements	Partially conforms to requirements X	Does not conform to requirements
<p><u>Justification:</u></p> <p>The members of ordinary and visiting staff are qualified professionals, but limited number of people and PhD holders at the Department, high average age, lack of research positions and application of lowered quality standard towards the staff do not guarantee sustainability of studies.</p> <p>Finances are very much dependent on the central budget as some shortage of resources could be considered and the fundraising potential of the staff members is very low. The infrastructure of the department is on the necessary level, with minor shortcomings.</p>			

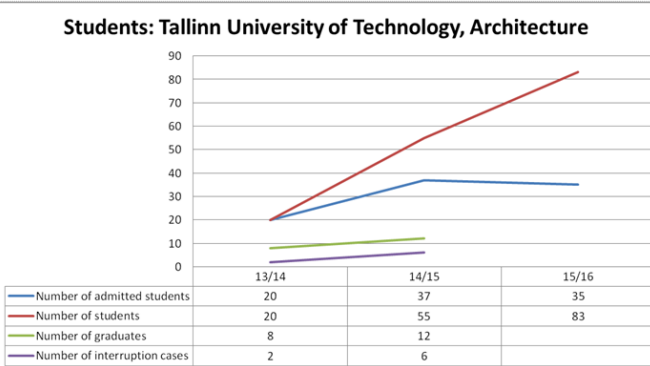
3. ASSESSMENT OF SUSTAINABILITY OF CONDUCTING STUDIES

COMPONENT ASSESSMENT AND CONFORMITY TO REQUIRED STANDARD:	CONFORMS TO REQUIREMENTS	PARTIALLY CONFORMS TO REQUIREMENTS	DOES NOT CONFORM TO REQUIREMENTS
Quality of conducting studies		X	
Resources		X	
<p><u>Comments:</u></p> <p>The curriculum could have a good potential but sustainability of conducting studies is questioned by lacking mission statement, ignoring demand of the labour market for architects with a polytechnic background and with the expectations of students and employers.</p> <p>The members of ordinary and visiting staff are qualified professionals, but limited number of people and PhD holders at the Department, high average age, lack of research positions and application of lowered quality standard towards the staff do not speak for sustainability of studies.</p> <p>Finances are very much dependent on the central budget as some shortage of resources could be considered and the fundraising potential of the staff</p>			

members is very low.

Sustainability of the Institution and increasing number of students are considered. TUT has a strong tradition of development planning. The departmental development plans, however, are in part overambitious and it remains unclear if and how much the action plans serve as real planning instruments.

3.1. Sustainability criteria in addition to quality and resources

REQUIREMENTS	EVIDENCE GATHERED	COMMENTS																				
Trends in the number of students and graduates, and the budget of <u>an educational institution</u> in the last five years indicate sustainability.	Consolidated financial report of TUT (2014), report of R6D activities (2014), TUT comments to the draft report.	The numbers of potential students have almost reached the expected minimum after a longlasting decline over the last ten years in Estonia and it also influences TUT (the total number of students was 13488 in 2012 and 12863 in 2014). However, the submission to TUT shows a relative increase. The share of students of the TUT was 21.1% of all students in Estonia in 2012 but increased to 23.6% in 2014. The budget of TUT was slightly decreasing in 2014 (data for 2015 are not available yet) and the financing from the Ministry of Education and Research decreased 13,9% between 2010 and 2014. These changes, although showing negative absolute trend, are not questioning the overall sustainability of the institution. The total financing of education and research by budgetary instruments was increased in this period by ca. 23%.																				
Trends in the number of students and graduates of <u>the study programme group</u> in the last five years indicate sustainability	Statistics from high education database provided by EKKA.	<div><p>Students: Tallinn University of Technology, Architecture</p><table><tr><th></th><th>13/14</th><th>14/15</th><th>15/16</th></tr><tr><td>Number of admitted students</td><td>20</td><td>37</td><td>35</td></tr><tr><td>Number of students</td><td>20</td><td>55</td><td>83</td></tr><tr><td>Number of graduates</td><td>8</td><td>12</td><td></td></tr><tr><td>Number of interruption cases</td><td>2</td><td>6</td><td></td></tr></table></div> <p>The programme was started in 2013. 20 first year students are regularly accepted but a substantial number of students are taken to the fourth year is a result of recognition of former studies and work experience of the graduates of the TTK University of Applied Sciences.</p>		13/14	14/15	15/16	Number of admitted students	20	37	35	Number of students	20	55	83	Number of graduates	8	12		Number of interruption cases	2	6	
	13/14	14/15	15/16																			
Number of admitted students	20	37	35																			
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Number of interruption cases	2	6																				

		<p>The number of students and graduates have been increasing within last few years. The figures reflect high interest in the programme, moderate drop-off rate and some early graduates who seemingly started their studies before the rearrangement of the curriculum.</p> <p>Trends in the number of students and graduates, and the budget of an educational institution indicate sustainability.</p>
An educational institution regularly plans its development: the institution has a development plan accompanied by an action plan to ensure sustainability both in the educational institution and in a given study programme group.	TUT strategic plans for 2011-2015 and 2016-2020.	<p>The TUT regularly plans its development and sets goals to ensure its academic quality. TUT establishes action plans and has a follow-up tradition.</p> <p>The development plans of the faculties, research institutions and colleges are adopted by the councils concerned and approved by the Rector. The fulfilment of the objectives set in the development plans is ensured by a step-by-step implementation of one- or two-year activity plans.</p>
The implementation of an action plan is analysed and the analysis forms the basis for planning of the next development period.	Departmental research and development plan 2016-2019 and research and development report until November 2015.	<p>A summary of departmental activities during the period 2012-2015 is provided but it remains unclear if and how much the action plan served as a planning instrument during the planning period. TUT is generally following the fulfilment of the development plans, creating one- or two-year action plans that are subject to monitoring on a regular basis. If and how this has been implemented in the department is not clear from the documents.</p> <p>The departmental development plan for 2016-2018 is provided, the latter contains an action plan.</p>

		<p>The research part of the development plan of the Department is overambitious, as the research potential and former record of achievements of the staff members is too low to obtain research grants from competitive sources. The risks arising from low overall research potential of the Department are insufficiently considered.</p> <p>The plans are not considering possible changes that may arise from the forthcoming reform of teaching activities specified in the TUT strategic plan 2016-2020.</p>
An educational institution has prepared a financial projection to achieve objectives described in a development plan and to minimise possible risks (including risks coursed by demographic trends).		<p>The financial projection is published on the web but the risk management issues are not considered in this document.</p>

<u>3. SUSTAINABILITY OF CONDUCTING STUDIES – ASSESSMENT SUMMARY</u>	Conforms to requirements	Partially conforms to requirements X	Does not conform to requirements
<p><u>Justification:</u></p> <p>The financing from the Ministry of Education and Research decreased 13,9% between 2010 and 2014 and the number of students in TUT is decreasing but, against the background of the demographic situation in Estonia, are not questioning the overall sustainability of the institution.</p> <p>The increasing number of students reflect high interest in the programme and moderate drop-off rate.</p> <p>The department is making development plans although it remains unclear if and how much the action plans serve as planning instruments. The development plan of the Department is overambitious in some parts and the risk management is insufficient. The risk management issues are not</p>			

considered also in financial projection of the institution.

The fact that the education at TUT emphasizing the technical skills in architecture is not reaching its goals, together with organisational deficiencies, limited cooperation within the university and outside, staff qualification and quality problems and very low level of R&D activities are questioning sustainability of the programme.