Национальный центр профессионально-общественной аккредитации

ПОЛИТЕХ Санкт-Петербургский Политехнический Университет Петра Великого

ACQUIN Akkreditierungs-, Certifizierungs- und Qualitätssicherungs-Institut

Accreditation Report

Accreditation of the double degree study programme «Industrial and civil construction of unique buildings and structures specialty» (B.Sc.)
for the specialty «Construction» (08.03.01)

Delivered by the Federal State Autonomous Educational Institution of Higher Education "Peter the Great Saint –Petersburg Polytechnic University"

I Accreditation procedure

Signing of the Contract: 29 October, 2014

Self-Evaluation Report submitted on: 1 September, 2015

Dates of the site visit: 20-22 October, 2015

Standing Expert Committee: Committee for Engineering and Technical Sciences

ACQUIN coordinator: Dr. Stefan Handke

Accreditation decision by ACQUIN: 31 March, 2016; 26 March, 2018

Members of the Peer Group:

- **Professor Dr.-Ing. Hans-Joachim Bargstädt,** Professur Baubetrieb und Bauverfahren an der Bauhaus-Universität Weimar, Vorsitzender (Amtszeit 1.1.2007 bis 31.12.2008) des Fakultätentags für Bauingenieurwesen und Geodäsie; Mitglied im 4Ing: Fakultätentage der Ingenieurwissenschaften und der Informatik an Universitäten, Deutschland
- **Professor Dipl.-Phys. Andreas Gerber,** Fakultät Architektur und Energie- Ingenieurwesen Hochschule Biberach, Professur Bauphysik und Klimagerechtes Bauen, Prodekan der Fakultät (2006 bis 2010); Mitglied und stellvertretender Sprecher des Fachausschuss Hochschule der Deutschen Gesellschaft für Sonnenenergie; Mitglied der Deutschen Lichttechnischen Gesellschaft, der Deutschen Physikalischen Gesellschaft und der International Building Performance Simulation Association, Deutschland
- **Professor Dr. Wladimir Jerofejew,** Dekan der Fakultät für Architektur und Bau, Lehrstuhlinhaber des Lehrstuhls für Bauwerkstoffe und Technologien der Mordowischen Staatlichen Ogarev-Universität, Russland

- **Wladimir Linow,** Leiter der Projekte der GmbH „Architekturbüro „Studio 17"; Vorstandsmitglied des Architekturverbandes St.-Petersburg; Mitglied des Stadtrates St.-Petersburg; Renommierter Architekt der Russischen Föderation; Empfohlen durch den Architektenverband St.-Petersburg, Russland
- **Dmitrij Petrow,** Studiengang „Bau von einmaligen Gebäuden und Anlagen" an der Fakultät für Bauwesen, Sankt-Petersburger Universität für Architektur und Bauwesen, Russland

Content

II Context

The experts wish to thank organizers, teachers and students participating in the reception of the Peer Group in Saint Petersburg for the opportunity to participate in the meetings, openness and readiness to answer questions. This kind of involvement is very valuable not only for the evaluation of the study programmes but also for a better understanding of the legal and socio-cultural background of the Russian system of higher education, and in particular, Peter the Great Saint Petersburg Polytechnic University (SPbPU).

The objective of the international accreditation procedure is to evaluate and recognize the high quality of offered study programmes against international accreditation standards according to European Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG-ENQA). During the procedure of joint accreditation the legal norms of both countries were taken into consideration.

Special regulations (common for both countries structural regulations on accreditation of Bachelor and Master programmes, rules of the Accreditation Commission for accrediting study programmes and system accreditation) which are necessary for awarding the quality label (Urkunde) are not considered here.

In the event of successful joint accreditation NCPA's National Accreditation Board awards the Certificate of joint international accreditation of the study programme for the period of up to 6 years.

The ACQUIN Accreditation Commission (Akkreditierungskommission ACQUIN) can make the following decisions:

- **Unconditional accreditation** (Akkreditierung ohne Auflagen). In case of first time accreditation the term is 5 years.
- **Accreditation with conditions** (Akkreditierung mit Auflagen). The study programme is accredited with certain conditions as it reveals certain content and structural weaknesses or inconsistencies that may be corrected within a 12 month period. This, in fact, may be a high quality programme which needs improvement in some areas. In case of conditional accreditation the accreditation term is reduced. After the submission of documents testifying to the timely implementation of obligations and the confirmation of this fact by the Accreditation Commission the term is extended to the normal period. If the implementation of obligations has not been confirmed the accreditation is not extended.
- **Rejection**

1 General Information about the HEI

The Federal State Autonomous Educational Institution of Higher Education "Peter the Great Saint –Petersburg Polytechnic University" (hereinafter SPbPU) – is a multifunctional state higher educational institution. In 2010 it got a status of a national research university in recognition of its role and capacities in the field of education, as well as multidisciplinary research and development.

Among the Russian universities of technology, Saint Petersburg Polytechnic University has always been ranked among the leaders.

At the moment SPbPU includes 11 basic institutes, departments of Professional Training, branches in the cities of Cheboksary, Sosnoviy Bor, Cherepovets, a complex of research departments including the Joint Institute of Science and Technology, research and educational centers, a number of specialized research and production structures, sports and recreation complex, vacation camps.

The University trains:

- Bachelors and Masters of Science within 49 training directions in science and technology;
- Specialists (engineers, economists, managers) within 9 training directions;
- Candidates of Sciences and Doctors of Sciences in 92 scientific training directions.

Forms of studies: full-time education; part-time (evening studies); correspondence course

SPbPU provides an opportunity to get postgraduate education – doctoral degree, second higher education, retraining in the future-oriented training directions.

Students' cohort:

- 15807 people –full-time education,
- 4200 people - part-time (evening studies),
- 4160 people – correspondence course,
- 1100 people–professional trainings programs (second higher education, professional development, etc.).

SPbPU has concluded 340 cooperation agreements with 253 Universities from 47 countries all over the world. Out of this number 58 Universities are listed in the Top-500 in QS World University Rankings.

In 2014 64 cooperation agreements with foreign Universities were signed , out of which 15 new agreements are concluded with the Universities listed in the QS 100-500 rating; also 7 agreements were signed on student mobility.

In 2014 SpbPU, being one of the leading Universities-participants in the Programme «5-100-2020», on suggestion of the Ministry of Education, has become a partner in the implementation of the project on the development and implementation of development programmes of Slavonic Universities.

The development of strategic partnership with foreign Universities has become a key component of inter-institutional cooperation.

The material and technical resources of SpbPU comprise : 18 teaching and laboratory buildings, 17 buildings of engineering infrastructure, 29 architectural monuments, 5 social infrastructure facilities, 15 dormitories, 7 residence buildings and 98 other objects (including workshops, boxes, garages and other facilities) with general area of 480 000 square meters, out of which 262789, 9 m² are classrooms and laboratories. Altogether there are 350 rooms equipped for studies, practical and research work. Laboratory facilities provide for quality delivery of all educational programmes and research work of undergraduate and post graduate students and staff.

At the university, 11 institutions and 105 departments are involved in both education and research: the Institute of Civil Engineering (ICE); the Institute of Power Engineering and Transportation (IPET); the Institute of Metallurgy, Mechanical Engineering and Transport (IMMET); the Institute of Physics, Nanotechnology and Telecommunications (IPNT); the Institute of Computing and Control (ICC); the Institute of Applied Mathematics and Mechanics (IAMM); the Institute of Industrial Economics and Management (IIEM); the Institute of Humanities (IH);the Institute of Military Engineering and Safety Research (IMESR); the Institute of International Educational Programs (IIEP); the Institute of Physical Training, Sport and Tourism (IPTST).

Three branches also provide education and training. These are the Cheboksary Institute of Economics and Management (Branch) of FSAEI HE "SPbPU", the Institute of Management and Information Technology (Branch) of FSAEI HE "SPbPU" in Cherepovets, the Nuclear Energy Institute (Branch) of FSAEI HE "SPbPU" in Sosnovy Bor.

As of December 2014 the united library stock of the University comprise 2 978 097 storage items. During the reporting period 31 137 documents in the amount of 9 812 691, 30 rub. have come in from various sources and which have been entered on library's books and records. Of which the book stock – 24 792 items. (6 510 titles), periodicals – 6 342 items (598 titles to include 13 – foreign). A considerable part of foreign electronic information resources have been supplied by the non-profit partnership "National electronic and information consortium" and the Russian Foundation for Fundamental Research as SPbPU is a participant of the Federal target programmes.

One of the largest student trade union organizations in St. Petersburg founded in 1965 is active in the University. Today the organization includes of 13000 full time students of SPbPU .

The Master's study programme «Processing Technologies of Materials» («Metallurgy») is well-integrated in the HEI's strategy. The goals and qualifications of the programme are well defined and sound. The students' competencies correspond to the target Master level. The programme under accreditation is in compliance with the mission and development strategy of the University.

2 Description of the double degree programme

The double degree Bachelor programme "Industrial and Civil Construction of Unique Buildings and Structures" ("Construction") is delivered by the Institute of Civil Engineering together with the Mikkeli University of Applied Sciences (Mikkelin ammattikorkeakoulu, http://www.mamk.fi/) with the goal of training engineers for project manager and administrative positions in the sphere of construction.

The Mikkeli University of Applied Sciences is a multidisciplinary educational institution providing high-quality higher education in different research areas. Among all Finnish universities MUAS is one of the most dynamic educational institutions in the sphere of research activity and international projects.

The department of "Construction of Unique Buildings and Structures" headed by the Doctor of Technical Sciences, professor N.I. Vatin, is a leading department in the sphere of education quality improvement. The total number of the teaching staff is 30 people (5 teachers have an academic degree of a Doctor of Science and 6 teachers have an academic degree of a Candidate of Science). In addition 4 Doctors of Science having a second job are also involved in the educational process. Foreign specialists take an active part in the educational process as well.

An international orientation of the programme allows its graduates to have real opportunities for the future career growth.

The short description of the education programme under accreditation delivered by the Federal State Autonomous Educational Institution of Higher Education "Peter the Great Saint-Petersburg Polytechnic University" is presented in the table below:

Table 1 – The short description of the programme

SECTION I	
Double degree study programme	"Industrial and Civil Construction of Unique Buildings and Structures" (Construction)
Level of education / Duration of training	Bachelor's program / 4 years (SPbPU) 1,5 years (Mikkeli University of Applied Sciences, Finland) Joint programme - 4.5 years
Subdivision (Head of Department)	Institute of Civil Engineering, director, doctor of technical sciences, professor Vatin Nikolai Ivanovich

Graduate departments (Heads of graduate departments)	The department of "Construction of Unique Buildings and Structures", head of department, doctor of technical sciences, professor Vatin Nikolai Ivanovich
Date of review	October 20-22, 2015
Person in charge of accreditation	Prof. Dmitry Germanovich Arseniev, Vice-Rector for International Affairs
SECTION II	
Number of ECTS /Credits	240 ECTS
Terms (number of semesters) and form of education	8 semesters, full-time education, ("Peter the Great Saint-Petersburg Polytechnic University", Institute of Civil Engineering) 7,8, (9 thesis defense), Mikkeli University of Applied Sciences Total 4.5 years
Beginning of training (winter / summer semester)	Winter semester – September 1 Summer semester – February 1
Date of the beginning of the program implementation	2009
Previous accreditation (date, duration of the accreditation, accreditation agency)	State accreditation No 0733 dated 03 July 2013 until 11 March 2019 (In Russia it is programme accreditation)
Target group	Bachelor degree students. The programme provides training of students aiming to build a successful business career in the leading Russian and multinational companies
Prerequisites for the admission to training	high GPA, second-language skills
Opportunities for further education (after completion of the study program)	The programme provides training of students aiming to build a successful business career in the leading Russian and multinational companies
Number of places	20
Tuition fee	Free of charge
Employment, potential areas of professional activity	Employment in the following companies: Skanska, Yit, lemminkainen, LSR, Lenspecsmu, Renaissance Construction, CDS.

The joint programme implemented together with the Mikkeli University of Applied Sciences (Finland) lasts 4 years and 5 months and includes 320 ECTS; 240 of them are delivered in the Peter the Great Saint-Petersburg Polytechnic University, and 80 ECTS are delivered in the Mikkeli University of Applied Sciences.

The students of the double-degree programme study at the Mikkeli University of Applied Sciences during one academic year. In the last 5 months students prepare and defend their thesis for a Bachelor's degree (15 ECTS), and do practice (5 ECTS). The work placement may be carried out either in Saint-Petersburg or in Finland during summer semester. A student admitted to the double-degree programme "Construction" at the Mikkeli University of Applied Sciences should complete studies in the period of 1.5 years.

A Bachelor's degree of MUAS is awarded to a student after fulfilling the requirements of the study process at the Mikkeli University of Applied Sciences and undertaking internship within the framework of the programme. However, a student should master the 240 ECTS programme in

SPbPU before getting a Bachelor's degree of the Mikkeli University of Applied Sciences. This is due to the fact that in order to get a Bachelor's degree in MUAS, credit transfer of the period of study is made in SPbPU.

As a result of mastering the Bachelor degree programme a graduate should have the general cultural competences, *general professional competencies and professional competencies*.

A graduate of the programme is expected to obtain the following *general cultural competences*: to use the basics of philosophy to form worldview approaches; analyse main stages and laws of historical development of society to form a civic position; use the basic principles of economic and legal knowledge in different spheres of activities; be able to communicate in oral and written forms in Russian and foreign languages to solve the issues of interpersonal and intercultural interaction; work in a team, tolerate social, ethnic, confessional and cultural differences, be ready for self-organization and self-education; use methods and means of physical education to provide social and professional activities; use methods of first aid and defence in emergency situations.

A graduate of the programme is expected to obtain the following *general professional competences*: to use principal laws of science in a professional activity, apply methods of mathematical analysis and mathematical (computer) modelling, theoretical and experimental research; determine the natural-science subject matter of problems arising in the course of professional activity and use a corresponding physical-mathematical tool for problem-solving; know basic principles of geometric shaping and intercrossing of flatness and space models, necessary for making building drawings and detailed engineering drawings; know efficient rules, methods and means of collection, exchange, storage and processing of information, have PC skills; know basic methods of staff and population protection from possible accident and disaster impact; conduct search, storage, processing and analysis of information from different sources and data bases, present information in a required format with the use of information, computer and net technologies; be ready to work in a team, perform management tasks, prepare documentation to create a quality management system of production departments; know how to use normative legal documents in a professional activity; know foreign languages at the level of professional communication and written translation.

A graduate of the programme is expected to obtain the following *professional competences*:

- Design and survey studies:

- To know regulatory systems in the sphere of engineering surveys, principles of civil and structural engineering, equipment and engineering systems design, planning and occupation;
- To know methods of engineering surveys, design technology of details and constructions in accordance with the design specification with the use of universal and specialized programming and computing suites and computer-aided designs;
- To conduct preliminary techno-economic justification of design concepts, develop project and engineering documentations, perform design and construction work, control correspondence of developing projects and engineering documentations to the specification, standards and other normative documents;

- Engineering and manufacturing activities:
  - To participate in designing and survey of professional work objects;
  - To know labour protection requirements, safety and environmental protection during installation and construction work, remedial and reconstruction work of construction projects;
  - To conduct and organize technical maintenance of plant and equipment, assure reliability, safety and working efficiency;
  - To carry out the analysis of technical and economic efficiency of a manufacturing department work and develop measures for its improvement;
  - To know technology, engineering following up methods and technological processes of construction, exploitation, building maintenance, production of construction materials, machines and equipment;
  - To prepare documentation on quality management and quality control method of technological processes at production sectors, organize work places, maintain technological infrastructure, technological equipment maintenance, conduct control of compliance with process specifications, labour protection requirements and ecological safety;
  - To know procedural and institutional foundations of management and business activity in the sphere of construction, housing and utilities infrastructure, basis of work planning and wages fund;
  - To know methods of implementing innovative ideas, organization of work and effective management, preparation of documentation to create a quality management system of production departments;

- To develop operative working plans of primary production departments, conduct cost analysis and analysis of activity results, make engineering specification and reporting;

- Experimental-research activity:
  - To know scientific and technical information of domestic and foreign experience in the profile of activity;
  - To know methods and means of physical and mathematical (computer) modeling by using universal and specialized programmes - computer systems, design automation system, standard kits of research automation, know testing methods of building constructions;
  - To prepare reports, participate in implementation the research and practical studies results;
- Mechanical and operational activity:
  - To know rules and technology of structure erection, fixing, testing, completion and exploitation of constructions, engineering systems and equipment of construction projects, rules of specimen product acceptance, produced by a company;
  - To know methods of experimental check of equipment and different tools;
  - To know methods of monitoring and evaluation of technical state and remaining lifetime of construction facilities, construction and housing-and-municipal equipment;
  - To organize in-service inspection, repair, equipment acceptance, make applications for facilities request, prepare engineering documentations and operational and service manual;
  - To organize and plan technical maintenance of buildings and constructions in order to provide reliability, efficiency and safety of their functioning.
- Entrepreneurial activities:
  - To know the basic principles of pricing and budget in construction, housing and utilities infrastructure, develop measures to improve technical and economic efficiency of construction organizations activity;
  - To plan events for improving investment prospects of construction buildings.

At the end of studies a graduate is expected:

- to know:

- a foreign language; philosophical aspects of science and technology; engineering surveys, designing, construction, exploitation, maintenance, monitoring, evaluation, repair and reconstruction of buildings;
- building services and equipment of construction sites and transport infrastructure; equipment and technology application for construction and installation activities, facility management.

- to be able to do:
  - to carry on a general dialogue in a foreign language, to read foreign literature for professional purposes without a dictionary; to translate specialized literature;
- to possess:
  - ways and methods of business communication in the professional sphere;
  - techniques of team work.

3 Achievements of the study programme

3.1 Quality of the delivered educational programmes

The Russian part of the educational programme is a part of an educational process in the framework of the programme 08.03.01 "Construction". In 2014 the educational programme 08.03.01 was successfully accredited by the Federal Agency for Supervision in Education and Science of the Russian Federation. In 2015 the certification authority of management systems "Test - St. Petersburg" certified that the management system of SPbPU meets the requirements of ISO 9001:2008 in respect to the educational activity within the programme 08.03.01 "Construction" (Bachelor's degree programme). The same certificate was gained from the Association IQNet – International Certification Network.

The quality of education is confirmed by achievements of students in subject olympiads: students of the Institute of Civil Engineering place high and represent Saint-Petersburg at all-Russian tour of Olympiad on mechanics of materials; Internet-Olympiads on informatics, theoretical mechanics, mechanics of materials, mathematics and physics (1 and 2 places, 2 medals, 2015); in Interacademic Olympiad on military topography (1 place, 2015).

Finnish Higher Education Evaluation Council (FINHEEC) conducted audit of the Mikkeli University of Applied Sciences and granted a quality certificate, valid during 6 years from 21.02.2013 till 21.02.2019

3.2 Provision of up-to day content of education

Provision of up-to day content of training of students is provided by a systematic review of educational programmes (in particular, in the process of reengineering of working plans), implementation into the educational process of the outcomes of research carried out by teachers, regular invitation of qualified specialists from foreign HEIs and those included into TOP 500 of world university rankings to give lectures and classes.

3.3 Research work

Magazine of Civil Engineering edited by the Institute of Civil Engineering of SPbPU is one of the leading magazines of Russia in the sphere of construction, which was applied in the bases Scopus and Web of Science and is included in a new publications listing of peer-reviewed editions of State Commission for Academic Degrees and Titles of the Russian Federation (it is a listing of periodical editions; publication in these magazines is taken into account during thesis defense).

Students of the Institute of Civil Engineering annually participate in international competitions with great success: V International competition of thesis research in the sphere of construction with the use of TechnoNICOL materials (a student of the department of the Institute of Civil Engineering with the project «Multi-purpose complex with the use of the system Double-skin facade», 5 place, 2015); seminar METNET (International Seminar in Budapest, October 13-14, 2015) post graduate students and a student of the Institute of Civil Engineering were authors and co-authors of the following reports: "Buckling behavior of perforated cold-formed columns" (Marsel Garifullin, Alexey Sinelnikov, Maria Bronzova, Nikolai Vatin); "Surrogate model for rotational stiffness of welded tubular Y-joints" (Markku Heinisuo, Kristo Mela, Teemu Tiainen, Timo Jokinen, Jolanta Baczkiewicz, Marsel Garifullin). Students of the Institute of Civil Engineering took in person and virtual participation in 16 international symposiums MASE 2016, held by Association of Macedonian of Structural Engineers.

3.4 Employability of graduates

Graduates of the educational programme are in demand in Saint-Petersburg and other regions of Russia. In-demand of graduates and opportunity of study at a double-degree programme determines importance of a Bachelor programme among applicants. According to an average grade of the Unified State Examination of applicants enrolled in "Architecture and Construction" and "Construction" in 2013, 2014 and 2015 the Institute of Civil Engineering ranks first in Russia.

3.5 Material and technical base

Laboratory and practical studies in the framework of the programme in the field of "Construction" are held in modern laboratories equipped with the latest technologies. Together with Ecomatik

AS (Estonia) there was created an International Research and Educational Centre "Heating, ventilating and construction heat engineering".

3.6 Academic mobility of students

The most popular form of student mobility is a semester education (in particular, in the framework of net and joint educational programmes) as well as participation in conferences and seminars in winter/summer schools. Students aiming to study at Mikkeli, may have a short-term or semester education abroad with an individual financial support in the framework of the programme 5-100-2020 in Germany, Italy, Spain, USA, Finland. Teachers also can improve their qualification through the programme 5-100-2020.

3.7 International projects

The Institute of Civil Engineering takes active part in:

- TEMPUS 144747-TEMPUS-2008-FR-JPCR projects «Development of Master degree programmes "Engineer-economist in the sphere of energetic and sustainable development" and EFEM - Efficient Energy Management in the framework of the SOUTH-EAST FINLAND RUSSIA ENPI programme;
- 530603-TEMPUS-1-2012-1-LT-TEMPUS-JPCR project "Reformation of the Curricula on Built Environment in the Eastern Neighbouring Area";
- EDUSTROI - Development of construction and real estate sector education, Erasmus+ «Master Degree in Innovative Technologies in Energy Efficient Buildings for Russian & Armenian Universities and Stakeholders – MARUEEB».

The results of work of these projects are used in implementation of the double-degree programme.

III Description and evaluation

As a result of the Site Visit and analysis of written documents the Peer Group gave the following evaluation of the study programme.

1 Target goals

1.1 Goals of the study programme «Industrial and civil construction of unique buildings and structures» for the specialty «Construction» (B.Sc.)

The strategic objective of SPbPU is modernization and development of the Polytechnic University as a globally competitive research and academic centre, which integrates multidisciplinary scientific studies and technologies of the international level and which is one of the leading universities of the world. It is expected that by 2020 Peter the Great Saint Petersburg State Polytechnic University will be included into TOP-100 in QS World University Rankings.

In this regard, the University managers have selected a number of study programs with international participation to have both national and international accreditation. One of such programmes is the double degree study programme «Industrial and civil construction of unique buildings and structures». The academic advisor of the programme is the Director of the Construction Engineering Institute, Head of the Department "Construction of unique buildings and structures", Prof., Doctor of Engineering Nikolay Vatin.

Mikkeli University of Applied Sciences, Finland (Mikkelin ammattikorkeakoulu, MAMK, http://www.mamk.fi/) was selected as the partner-institution for the double degree programme. MAMK is a multidisciplinary educational institution providing quality education in a variety of research fields. Among all Finnish Universities MAMK is one of the most active educational institutions in carrying out research and participating in international projects.

The goal of the educational programme is training multi-skilled experts with multidisciplinary knowledge, capable of doing academic research and constructing at the building companies. After the successful completion of the programme, Bachelor students are awarded with 2 diplomas of the Russian and Finnish standards and get a profound knowledge of the English language. It is worthwhile mentioning, that the double degree study programme "Industrial and civil construction of unique buildings and structures" is one of the few ongoing Russian-Finnish double degree programmes of the "Construction" profile.

The educational programme is integrated into the overall strategy of SPbPU and is aimed at training specialists for the national and international labour markets: it is taught in two languages by two universities; it is multidisciplinary, as it effectively links the disciplines of the construction

technologies profile; the presence of such a programme at the University increases its global competitiveness.

Special booklets in Russian and English with the goals and contents of the programme were published. These booklets are distributed among prospective students during Open house days and education fairs. The data on the goals and learning outcomes of the educational programme are included into the Agreement on Cooperation between the Universities, available to anyone interested via Moodle learning platform. It also contains current news and other useful information.

The detailed information about the programme can be found at the websites of both Universities: Mikkeli University of Applied Sciences at http://www.mamk.fi and Peter the Great Saint Petersburg Polytechnic University (http://eng.spbstu.ru/academic-programs/bachelor-s-degree-in-english/) and accessible to all interested persons from all over the world.

In 2014 fifteen students of the department "Construction of unique buildings and structures" were trained abroad on double degree programs in the main educational courses.

1.2 Conclusions

Development and an attempt to accredit the double degree educaitonal programme "Industrial and civil construction of unique buildings and structures" is in full compliance with the University strategy. First of all, the programme is delivered in two langugaes by two universities, which significantly contributes to SPbPU internationalization. Secondly, the programme is multidisciplinary, it links the disciplines of construction technologies profile, which is also in line with the general strategy of the University. Thirdly, the presence of such a programme at the University increases its global competitiveness.

In the Peer Group's opinion, it is necessary to indicate the strengths of the programme. These include the following:

Rector and management units of the University very clearly understand their duties and the importance of the programme for the University, thus, adequately reacting to the problems arising in the learning and working context.

- The educational programme is characterized by academic and research approach.
- Students and teachers interact cooperatively, mainly due to favourable correlation between teachers and students (1:5).
- The Programme undergoing accreditation is in full compliance with the general strategy and mission of the University, i.e. focus on internationalization, multidisciplinary research and global competitiveness.

- In the educational programme undergoing accreditation a lot of attention is paid to better development of students' professional competencies and international cooperation in science.
- It is a good practice of the programme to carry out self-evaluation and adapt the curriculum to the labour market demands.
- By disciplines revision on the level of Departments it is possible to further develop and improve the programme.

It is also necessary to indicate the weaknesses in the programme:

- The information on the programme, available to employers is insufficient.
- Employer's opinion is not adequately taken into consideration when developing the programme and defining its objectives.

1.3 Recommendations of the Peer Group:

1. It is recommended to involve employers and representatives of the labour market to the revision of the goals of the educational programme and provide them with sufficient information on the double degree diplomas.
2. Students should be better motivated to be employed by the construction companies.

2 Concept

The training concept of the double degree programme consists in providing the students with an opportunity to study for three years at Peter the Great Saint Petersburg Polytechnic University and one year at a European Partner-University, being awarded 2 Bachelor diplomas of the Russian and Finnish standards upon successful programme completion.

SpbPU strategy of internationalization in 2014 is based on the Development Program of the National Research University and the Concept of international activity development of the University, approved by SPbPU Academic Council on May 30, 2011. A special role in the development of international activity of the Polytechnic University in 2014 is played by the Program of improving SPbPU competitiveness "5-100-2020" as well as the entry of the Polytechnic University in the top 15 universities of Russia, which won in the competitive selection for the right to receive subsidies from the Russian Ministry of Education and Science in order to improve their competitiveness among the world's leading research and academic centres.

The main objective of the educational programme of the university is internationalization and improving the efficiency of educational and research activities of the University through implementation of the best international practices, taking into consideration national traditions in

fundamental university education, formation of highly professional and high-tech environment that meets international standards and ensures quality development of education and science, strengthening export attractiveness of SPbPU educational and scientific programs through integration of advanced international technologies and national professional knowledge and skills in the field of international education and research.

2.1 Admission requirements

Admission requirements are regulated by the normative documents on education in the Russian Federation, RF Ministry of Education and Science, and by the admission regulations and requirements for entrance examinations of the University.

The double degree Bachelor programme "Industrial and civil construction of unique buildings and structures" was launched in cooperation with Mikkeli University of Applied Sciences and aimed at training specialists with good command of two languages- Russian and English for their further employment in Russian and foreign constrction companies, for carrying out research and participating in international projects. The programme was developed basedon Agreement on Cooperation between the Unviersities.

Admission of Russian Federation citizens for the first year of the double degree educational programme is carried out on a competitive basis: all candidates must have a certain level of proficiency in English. Eligible candidates for admission can be Bachelor Degree holders in "Construction", interested in doing international research or employment at joint Russian-Finnish construction companies. The programme of the first three years is taught in Russian at the home institution, and the fourth year is taught in English at the host institution.

The general recognition system of the Russian Federation is applied to qualifications obtained by a Russian student at the partner institution in compliance with international agreements. The recognition procedure is not applicable to this double degree programme as students obtain Russian Secondary School-leaving Certificate. Based on this document they are enrolled in the Bachelor program at SPbPU and Bachelor program at Mikkeli University of Applied Sciences. It is up to a student to provide the diploma, awarded by the Finnish partner university, upon successful programme completion, when dealing with employers.

Admission rules to the programme for foreign citizens are governed by the national Legislation and SPbPU regulating documents.

Additionally necessary admission requirements are met to accommodate different categories of applicants with special needs depending on their disabilities: loss of sight or partly sighted applicants.

2.2 Structure of study programmes

The educational programme includes: intended learning outcomes of the programme acquisition - students' competencies defined by the educational standard and students' competencies, defined by the institution in addition to the competencies defined by the educational standard, taking into consideration the profile of the educational programme (should these competencies be defined); intended learning outcomes in every discipline (module) and traineeship – knowledge, skills and/or work experience, characterizing the stages of competencies development and providing the achievement of intended learning outcomes upon the educational programme completion.

The general description of the educational programme includes the qualification conferred; kind (kinds) of professional activities to be carried out by the graduates; orientation of the educational programme; intended learning outcomes, developed upon the programme completion; data on the teaching staff involved in the programme delivery; annotations of disciplines with their workload; material and technical facilities; listed laboratory and other equipment, used in the educational process; possible traineeship sites and employments.

The curriculum contains a list of disciplines (modules), training sessions, assessments, final (state) attestation, other types of learning activities with defined workload in ECTS, sequenced and distributed over the period of studies. The curriculum specifically defines students' workload in their direct interaction with teachers (student/teacher contact hours) (by the types of learning activities) and the students' self-learning workload. Per each discipline (module) and training session, there is a form of an interim assessment defined in order to test students' knowledge.

The academic calendar specifies time for certain learning activities and vacation time.

The training session syllabus includes: type of traineeship, a way and a form (s), in which it is held; list of expected learning outcomes obtained after traineeship correlated with the expected learning outcomes of the Educational Program; place of the traineeship within the Educational Program; traineeship measured in credits, weeks, teaching or clock hours; traineeship contents; traineeship forms of reporting; assessment toolkit for an interim assessment of students' traineeship progress; list of course books and the Internet resources necessary for holding a traineeship; list of IT used during traineeship, including a list of software and information reference systems (if necessary); description of material and technical resources to hold the traineeship.

Assessment tools are represented as an assessment toolkit for interim and final (state) attestation of students.

The assessment toolkit for holding interim attestation in a discipline (module) or a traineeship integrated into a working programme of the discipline includes the following components: list of

competences and stages for their development during study programme mastering; description of ranking scales, indicators and criteria to evaluate competences at different stages of their development; standard control assignments or other materials required to evaluate knowledge, skills and experience, characteristic for the stages of competence development during the study programme mastering; guidelines that explain procedures to evaluate knowledge, skills and experience, characteristic for the stages of competences development.

The institution is liable to define indicators, criteria, ranking scales and assessment procedures of competencies development for every learning outcome of the discipline (module) or traineeship at different stages of competencies development.

The assessment toolkit for holding final (state) attestation includes the following components: list of competences to be developed by students upon mastering the study programme; description of ranking scales, indicators and criteria to evaluate competences; standard control assignments or other materials required to evaluate learning outcomes upon mastering the study programme; guidelines that explain procedures to evaluate the learning outcomes upon mastering the Study Programme.

Selection of teaching methods and resources, educational technologies and academic materials, used for the study programme delivery, is carried out independently by the institution in order to achieve the intended learning outcomes and based on students' individual capacity, should it concern students with disabilities.

When implementing an educational programme different teaching and learning methods are used, including distant lerarning, e-learning (in compliance with clause 2, article 13 of the law on Education).

The total Programme workload is 320 ECTS. The educational programme workload (its constituent part) is defined as the student's workload necessary to master the program (its constituent parts) including all types of his/her learning activities stipulated in the curriculum, in order to achieve the expected learning outcomes. The credit system (ECTS) is used as a universal unit to measure the workload of the educational programme and its constituents. The workload of the educational programme (its constituent parts) is expressed in the whole number of credits. In case of the programme undergoing accreditation the number is 320 ECTS. The credit for the study programmes developed in accordance with the Federal State Educational Standards includes 36 teaching hours (a teaching hour is 45 minutes long) or 27 clock hours.

The programme also contains the components aimed at preparing students for further professional activity, developing their key qualifications, intellectual and academic skills and the practical component of training. The academic mobility programme improves the quality of education, contributes to better understanding between different peoples and cultures, bringing

up a new generation well-prepared for life and work in the internationalized information environment.

A wide range of mandatory and selective disciplines provides the students with an opportunity to get knowledge from different fields of science, which they are going to need in their future career.

The programme contains information on the educational modules. Core modules provide a comprehensive training to students, as they are not only focused on learning the fundamentals, but also practical skills development at skills building sessions and laboratory workshops, as well as research guided by a research supervisor.

The joint double degree programme, undergoing accreditation, takes up 4 years and 5 months. The programme workload of the "Construction" profile (Mikkeli University of Applied Sciences, Finland) consists of 320 ECTS credits (European Credit Transfer System). Upon successful completion of the programme the students get 240 Credits at SPbPU and 80 Credits in MAMK.

Students enrolled in the double degree programme study in Mikkeli for one calendar year. Last five months of the programme are used for the preparation of the Bachelor graduation thesis (15 ECTS credits), traineeship (5 ECTS credits). Traineeships can take place either in Saint Petersburg or in Finland during the summer semester. A student enrolled in the double degree programme in the "Construction" profile at MAMK should complete his/her course of studies within 1.5 years.

After successful completion of the educational programme in Mikkeli and carrying out traineeships, stipulated in the framework of the programme, a student is awarded a Bachelor's Degree of the Mikkeli University of Applied Sciences. However, a student should complete the programme at SPbPU with a workload of 240 ECTS credits prior to Mikkeli study period. In order to complete a Bachelor's course in Mikkeli a number of credits are transferred from SPbPU.

2.3 Modularization and workload

The joint double degree study programme launched by SPbPU together with MAMK takes 4 years and 5 months. The first part of the programme takes 4 years (8 semesters), 2 semesters per year (Bachelor Programme, delivered at SPbPU Institute of Civil Engineering). The educational programme is properly divided into modules, well-structured and includes three modules: Humanities and Economics Module; Mathematics and Natural Sciences Module; Professional Module, Physical Education Module. The modules are allocated in the logical and correlated order.

The curriculum is logically organized with sequencing of the disciplines; the disciplines are also rationally spread between the semesters, based on equal distribution of the students' and teachers' workload.

The second part of education within the programme takes 1 year, and 5 months (2 semesters per year and 5 months for the preparation of the Bachelor's graduation thesis at the Mikkeli University of Applied Sciences.

A student enrolled in the Mikkeli University of Applied Sciences masters mandatory professional disciplines (60 ECTS credits), prepares Bachelor's graduation thesis (15 ECTS credits) and carries out traineeship (5 ECTS credits). Traineeship can take place either in Saint Petersburg or Finland during the summer semester. A student enrolled in the double degree programme "Industrial and civil construction of unique buildings and structures" should complete his/her education within 1.5 years.

The Peer Group has noted that the curriculum is logically organized with sequencing of the disciplines; the disciplines are also rationally distributed between the semesters based on equal distribution of the students' and teachers' workload and in compliance with the Finnish legislation. ECTS credit module system is implemented and functioning at the University.

One credit used to measure academic workload for study programmes includes 36 teaching hours (a teaching hour is 45 minutes long) or 27 clock hours.

Credits are used for two main reasons: credits provide the students with an opportunity to recognize the credits obtained as a result of discipline completion in one university by the partner-institution (transfer function); on the other hand, credits allow to define the position of a student on his/her educational trajectory and define, whether it is possible for him/her to continue education or go on to the next educational level (accumulative function). Students, willing to enroll in the double degree program and continue their education at Mikkeli University of Applied Sciences, after the third year submit to MAMK the transcript of the disciplines mastered, credits and grades obtained. Based on the data provided, MAMK enrols the student to continue the education or rejects the application. And vice versa, a student upon completion his/her studies at MAMK, submits the academic transcript to the home University for the credit transfer and shift to the next educational level.

One credit used to measure academic workload for study programmes includes 36 teaching hours.

After acquiring the necessary number of modules/courses a student gets 320 credits. Credits can be obtained only after the successful fulfillment of all the assignments and relevant grading of the learning outcomes.

In the first and second semesters students acquire Humanities and Economics Module and Mathematics and Natural Sciences Module. In the third, fourth and fifth semesters in addition to the above mentioned modules, students have to master the disciplines of the professional cycle. In the sixth semester there only two modules: Mathematics and Natural Sciences and Professional

modules. The seventh and eighth semester are entirely devoted to the disciplines of Professional module.

Humanities and Economics module includes such disciplines as History, Foreign Language, Philosophy, Economics, History of Industry, Specialty Introductory Course, Basics of Construction Economics, Law (Legal Basics in Construction), Social Technology of Management in Construction;

Mathematical and Natural Sciences Module includes such disciplines as Mathematics, Information Technologies, Phisics, Chemistry, Engineering Support in Construction, Geodesy, Engineering Graphics (Descriptive Geometry), Theoretical mechanics, Technical Mechanics, Resistance of Materials, Basics of Architecture and Building Constructions, Engineering support of Construction, Geology, Basics of Hydraulics, Parametric Modeling of Construction Objects, Soil Mechanics, Research Methods in Construction, Computer Graphics;

Professional module includes such disciplines as: Construction Materials, Electric Supply and Basics of Electric Engineering, Life Safety, Basics of Measurement Science, Standardization, Certification and Quality Control, Building Machinery and Equipment, Building Structures (metal structure, including welding, reinforced concrete, masonry, wooden and plastic structures), Building Architecture, Industrial and Civil Construction Design, Water Supply and Discharge, Structural Engineering, Basics of Project Management, Information Technologies in Construction, Foundations, Building Acoustics, Heat and Gas Supply and Basics of Thermal Engineering, Complex Design including Design of Unique Buildings and Structures, Engineering Systems including Engineering Systems of Unique Buildings and Structures, Frame Constructions and Structures, Organization, Planning and Management in Building, Basics of Organization and Management in Building, Technological Processes in Building, Economics of Building, Building Ecology, Elastic Theory, Dynamics of Unique Buildings and Constructions, Electric Power and Central Heating Production, Air Conditioning Systems, Refrigeration Technology, Design Principles of Heat, Ventilation and Air Conditioning System Management, Engineering and Design of Heat, Ventilation and Air Conditioning Systems, Installation and Start Up of Heat, Ventilation and Air Conditioning Systems, Heating System, Heating and Cooling System, Indoor Climate, Automation Equipment.

The educational programme undergoing accreditation develops and extends students' competencies in Engineering Systems mastered within SPbPU framework programme in the disciplines of Professional cycle studied at Mikkeli University of Applied Sciences.

Within the educational programme students obtain core qualifications based on competencies development within learning activities: exploratory, design and engineering (SPbPU, MAMK); engineering, manufacturing, production and managerial (SPbPU, MAMK); experimental research

(ability to carry out research, artistic (creative), practical activity) (SPbPU, MAMK), installation-setup and service maintenance (SPbPU, MAMK).

Acquiring basic qualifications will enable students to successfully fit into the engineering "pyramid" in order to develop innovative Economy:

- Category 3 (lower level of the pyramid): Qualified technical personnel, engineers - technicians - highly skilled workers, operating high-tech equipment (installation and commissioning, and service-maintenance);
- Category 2 (middle level of the pyramid): That refers to "linear" engineers: design engineers, production engineers, designers, system operators, builders (exploratory and design works, production and technological activities, manufacturing and management);
- Category 1 (top level of the pyramid): research engineers, design engineers, systems engineers, who should be able to:
    - engage in analysis and synthesis;
    - work with a technical system as a whole and its constituent parts;
    - work on different levels of materials and structures description beginning from nanoscale and micro-, meso-, macro- level description of modern functional and structural composite materials and composite structures;
    - to work with the entire chain of modern computer technologies CAD-CAM-CAE-PDM-PLM;
    - work in cooperation with design engineers, process engineers, IT-specialists, responsible for creating and maintaining the unified information space for all the stages of the parallel fulfillment of multiple projects and product life cycles (exploratory and design, engineering and manufacturing, and production and managerial, experimental and research (is capable of scientific, artistic (creative), practical work), installation and commissioning, and service-maintenance activities.

In the educational programme undergoing accreditation the competencies acquired correspond to the level of education (Bachelor), with regard to the requirements of the National and European qualifications frameworks. Qualifications are expressed in expected learning outcomes, i.e. what a student will know, understand and/or capable of doing upon the successful programme completion.

Learning outcomes are available from many sources: individual description of higher education institutions (as units/modules of the course and educational programmes); on the national level

(for the description of qualifications, qualifications frameworks and quality assurance modes); on the international level (for the purpose of wider recognition and transparency).

These are very important for the understanding of qualifications in the society, for example, by students and representatives of professional community.

2.4 Learning context

The Peer Group noted, that a variety of didactic tools and teaching methods are used in the programme delivery in order to develop students' professional competencies necessary in the field.

The following forms of classes are implemented in the educational process: lectures, practical and laboratory classes, workshops, individual classes, students' research activity. Within these forms of classes students acquire theoretical knowledge, master their practical and research skills.

The educational programme undergoing accreditation widely uses project learning, CDIO standards, which represent an engineering ideology covering the main stages of engineering under the principle "think-design-create-manage", carrying out interdisciplinary students projects (complex course papers fulfilled in the following disciplines Building Architecture, Parametric Modeling, Industrial and Civil Construction Design, Information Technologies in Construction, Engineering Systems including Engineering Systems of Unique Buildings and Constructions and other disciplines).

Integration of up-to-date technical teaching means: Both the Universities use Moodle e-learning platform. The Peer Group considers important to note that teaching is carried out in two languages: during the first three years –in Russian, during the fourth year – in English.

One of the key issues of engineer training is mandatory traineeships in the construction industry (SPbPU, MAMK).

Graduation thesis requirements are available from the Regulations on students' proficiency and final state students' attestation.

2.5 Conclusions

The Peer Group has noted the following strengths of the programme:

- The programme is fully complied with the mission of the University with regard to internationalization.
- The educational programme is characterized by academic and research approach.
- It is a good practice of the programme to carry out self-evaluation and adapt the curriculum to the labour market demands.

- Assessment of learning outcomes within the programme is on a very good level. There are different competence-based forms of control, oriented to the applied aspects of the programme, e.g. project work.
- Interim assessment facilitates ongoing interaction between a teacher and students.
- Cooperation with the Finnish University is presupposed within the programme which fosters student mobility.

The Peer Group also noted a few weaknesses of the programme to be improved:

The system of quality assurance currently applicable to the programme doesn't consider separate study programmes and disciplines within the programme. It is especially true, regarding students' and teachers' assessment feedback within the courses.

2.6 Recommendations of the Peer Group:

1. It is necessary to elaborate quality assurance actions on the level of the educational programme. Particularly, it is necessary to make sure, that teachers discuss assessment results with their students. In this respect it is also worthwhile to consider the derived grades, if the assessment results are not high enough.
2. It is recommended to increase the number of students enrolled in the programme. It is advisable to increase the number of students learning English.

3 Implementation

3.1 Resources

3.1.1 Infrastructure

SPbPU has all the necessary material and technical conditions for conducting a quality study process, this includes: academic and support facilities, dormitories, gyms, management offices, a students' club, Fundamental Library, Reading Hall, White (assembly) hall for 600 places, Conference hall, resource centers, Museum complex, Exhibition centre and other support facilities. The premises are supplied with all the necessary technical facilities, furniture and equipment, which helps to conduct the study process at a high level and create high-quality social conditions for students, teachers and other support staff.

The University has in place food service stations (refectories, canteens) for students and SPbPU's employees. By the Rector's order the students of the University get free breakfast.

Apart from material and technical stock, which provides the study process, the University has its own health and recreation resort. The HEI has all the necessary sports infrastructure, which is

actively used for conducting classes and sports club activities: the sports centre "Polytechnik", which includes a warm-up hall, workout hall, volleyball and basketball halls, halls for wrestling and boxing, gymnasium, skiing lodge, climbing wall, rehabilitation centre for students with health problems, weightlifting hall, chess club and others.

The University has contemporary technical academic equipment: over 215 computer classrooms are equipped with Internet access. Wi-Fi network is available through access points, which are located on every floor of most academic buildings, the Reading Hall of the Fundamental Library; it meets contemporary requirements for continuous access to educational resources of the local network and Internet. All the dormitories are also equipped with computer networks. There are also Multimedia centres in the University. The majority of classrooms are equipped with projectors, screens and other multimedia complexes. Some classrooms are equipped with electronic interactive boards (screens).

SPbPU supplies every student with general training and methodological literature and guidebooks, which are necessary for organizing the academic process in all the disciplines of study programmes according to the requirements of the state educational standards. Stocks of basic and additional literature are formed of study and methodological literature, guidebooks in hard copies and electronic form, which are included in electronic library systems. The information library complex provides students and teachers with the opportunity of limitless use of databases, which are purchased by the University by subscription in the corporative library system.

The Peer Group finds in necessary to note that the departments of both Universities, which participate in the academic process in the double degree programme, are supplied with a great amount of modern state-of-the-art equipment. Both departments founded research laboratories. The information on the equipment is available at the web-sites of the laboratories: http://tmslab.spbstu.ru/; http://www. tu-cottbus. de/einrichtungen/de/pantarhei/wir-ueber-uns/profil. html.

3.1.2 Academic resources and other mechanisms of the support system of students' independent work are fully available.

The educational platform Moodle is used in both partner Universities, it includes educational and methodological materials for students. In order to provide access to library resources, the University is working on equipping every dormitory with wireless Internet.

Every discipline of the study programme should be provided with academic literature. The teacher, who is in charge of the discipline, chooses one basic and two supplementary learning aids. All the academic literature is published not earlier than 10 years ago and stored in SPbPU's library in hard and electronic copies.

The Institute has tight connections with the leading construction companies of St. Petersburg. The Institute also cooperates with the construction companies with international capital, which use English as internal working language: Skanska, NCC, YUIT and other. These companies conduct practical training and workshops; the leading specialists conduct lectures in the English language.

3.1.3 Human resources

The teaching staff of the Programme is adequate. The Department of Industrial and Civil Construction of Unique Buildings and Structures is the leading department in the area of improving educational quality. The teaching staff consists of 30 teachers; this includes 5 Doctors of Sciences and 6 Candidates of Sciences. 4 Doctors of Sciences have been invited as part-time teachers. The Peer Group discovered that a considerable part of the teaching staff speak foreign languages and are experienced in working in Russian and foreign HEIs, which proves high academic mobility of the Programme's teachers. Some of the Department's teachers are closely connected with construction business; therefore we may say that the teachers, who are involved in the Programme, are practicing representatives of the profession. Foreign specialists also actively participate in the academic process. Administrative, technical, support staff and other personnel of the Department includes 26 employees.

The Programme comprises 320 credits ECTS. The total number of credits allocated by the SPbPU's programme is 240 (excluding optional courses). The total number of credits awarded by the programme of Mikkeli University of Applied Sciences – 80 ECTS. This includes compulsory professional academic disciplines (60 credits ECTS), Bachelor's graduation thesis (15 credits ECTS), practical training (5 credits ECTS). The teacher/student ratio is 1:5. The teaching and examination workload distribution of the teaching staff is equal.

The Programme's teachers take further education courses. In 2014 further training of the teaching staff was funded by Federal target programmes, the University's extra-budgetary resources, and the State budget according to the approved plan for all priority specialties.

Employment of teachers is conducted on the election basis. According to the Regulation of the Russian Federation Government of March 16, 2013 No. 211 the International Council for Improving Competitive Performance of the Leading Universities of the Russian Federation was founded; the Council is headed by the Minister of Education and Science D.V. Livanov.

HEI's programmes of improving competitive performance provide: forming the personnel pool of HEIs' executive staff and enrolling specialists, who have experience of working in the leading foreign and Russian Universities and research organizations; enrolling young researchers, who have experience of working in the leading foreign and Russian Universities and research organizations.

Teachers take part in research, construction and methodological activity, conferences, exhibitions and academic mobility programmes.

Improvement of foreign language skills is conducted at SPbPU's courses and independently.

The Institute's youth personnel pool is formed for the purpose of supporting young teachers.

3.2 Organization and processes of making decisions

3.2.1 Organization

Decisions on creating and improving study programmes are taken at the level of the Institute, University, Academic Council and Rector's office.

The management of training is conducted by the Institute's executive staff. Executive workers work out timetable of classes, control academic performance, keep students' personal record cards, schedule examinations. The coordinator and the Programme's research advisor are assigned by the University order. The coordinator is in charge of cooperation with the counterpart unit of Mikkeli University of Applied Sciences.

Organization of the Programme's academic mobility is executed by the department for international academic mobility http://eng.spbstu.ru/international-activity/departmentof-international-academic-mobility/

Students elect monitors, who are in charge of monthly attestation of students and interaction with teachers. In the process of the Programme's development the students' opinion was not considered, however, after the survey, changes of the Programme, which are proposed by students, will be taken into account.

3.2.2 Cooperation

Achievements in the area of training specialists are connected with important cooperation of the teaching staff and research workers with specialists, who work in other subdivisions of the University, conduct activities in other spheres of science, participate in online education and further training.

The Programme uses vast research potential of all the departments oft he Institute (105 departments).

SPbPU's participation in the activity of international associations on the basis of strategic network partnership with the world leading Universities is the priority task of international cooperation. Before 2014 SPbPU had 4 agreements on strategic partnership with the Universities of Germany and Austria (Leibniz Universität Hannover, University of Stuttgart, Technical University of Berlin, Graz University of Technology). In 2014 the University concluded agreements on strategic

partnership with Politecnico di Milano (Italy), Polytechnic University of Valencia (Spain), Tsinghua University (China), Laapenranta University of Technology (Finland), Russian-Armenian (Slavonic) University (Armenia), Belarusian-Russian University (Belarus).

In July 2014 SPbPU as one of the leading HEIs, which participate in the Programme 5-100-2020, as advised by the Ministry of Education and Science of the Russian Federation, became a partner in implementation of the project, specifically, in designing and executing programmes of development of Slavic Universities. The University provides expert support to two Slavic Universities.

Cooperation with foreign HEIs and research institutes provides the opportunity to conduct advanced training of research personnel, with competencies of international standards to the benefit of high-technology branches of the national economy.

SPbPU's development has a systemic influence on Russian HEI's, which train specialists in the sphere of high technology and, specifically, provides development of connections between leading technical HEIs, dissemination of the University's contemporary training technologies in other HEIs, development of the system of further training and professional retraining of teachers, research workers and postgraduates from other Universities, which includes organizing and executing joint workshops and conferences.

3.3 Assessment system

Every study course determines the list of individual and team tasks, completion of which is considered as a compulsory element of the course and a form of ongoing control of knowledge and skills. Execution results of such tasks are considered at the final attestation of the correspondent course.

The control of mastering the study programme is executed in the form of tests and examinations, whose organization is determined by the University's Regulations for course examinations and tests in compliance with the current legislative and normative documents, requirements of the Federal state educational standards and the University's Statute. The Regulations for course examinations and tests determine the order of admission, procedures of course examinations and tests, the order of making up missed academic assignments and expulsion for academic failures.

Students' knowledge and skills are evaluated by marks "excellent", "good", "satisfactory", „unsatisfactory", "passed" and "failed".

The attestation form (examination, test) is determined by the curriculum. Certain disciplines, types of practice and course papers include tests with mixed marking system ("excellent", "good", "satisfactory", "unsatisfactory").

Upon the Director's permission, students with good academic progress may take examinations and tests in disciplines, which are taught in the University and are not included in the curriculum of the specialty. A student makes a personal claim to include the results of such an attestation into an examination list, academic records book and official academic transcript.

Course examinations and tests are conducted in the disciplines of the approved curriculum. The academic year includes 2 semesters: autumn semester – from September to January, and spring semester – from February to July. Every semester ends with an examination period (January and June). The timetable of study process depends on the specialty, educational form and the year of study. Students take not more than 10 examinations and 12 tests each year. Examinations are conducted within examination periods, which are provided in the study timetable and approved by the Vice-rector for academic affairs.

In case theoretical and practical courses end before the examination period, examinations and tests are conducted during the semester. At that, all necessary conditions for examinations and tests are provided. In case of certain situations (long-lasting disease, extreme family circumstances) students are provided with leaves of absence for a period of maximum 1 year.

Missing examination without a valid reason is considered as a used attempt to take the examination and equated to the unsatisfactory mark. A reasonable excuse is temporary incapacity to work, which is proved by a sickness certificate. The certificate should be approved in the students' medical centre and submitted to the Institute's Director. Violation of examination procedure (cheating: use of reference material or manuscripts of reference type, methodological materials, computers, electronic notebooks and means of communication without the teacher's permission) results in removing the student from the examination (test) room with an unsatisfactory mark.

The Institutes Director recommends to expel students, who: failed to pass examinations and tests in three or more disciplines; failed to work up missed academic assignments within the period, which is specified by the Rector's order; failed to successfully complete a practice programme or received an unsatisfactory mark for the defense of a practice report; received an unsatisfactory mark for retaking examination; missed over 50% of classes without reasonable excuse; failed to pass intermediate attestation in three or more disciplines.

Expulsion of students for academic failure is executed by the Institute's Director after considering the case by the Expulsion Panel.

Monitoring the preparation for examinations and their procedure, in accordance with the Regulations, is the responsibility of the Academic Office. General control over following the procedures of the Regulations is the responsibility of the Vice-Rector for academic affairs.

Results of examination periods and proposals for improving the study process are considered at directorate meetings and the Institute's Academic Council.

3.4 Transparency and documentation

The Peer Group notes that a complete package of documents, which regulate the evaluation of knowledge and competencies of school leavers and students (information on study programmes, admission regulations and requirements for entrance examinations, requirements for applicants, information on academic process, requirements for evaluation of knowledge and competencies of students, special regulations and requirements for evaluation of knowledge and competencies, rules of qualification recognition), is developed and approved by the University.

Information on the study programme, admission rules and requirements for entrance examinations, requirements for applicants, information on the study process, requirements for evaluation of knowledge and competencies of students are published and available for students.

Rules of recognition of qualifications, which are acquired in foreign HEIs, are determined by the legislation of the Russian Federation.

In order to provide transparency and improvement of the current documents of the Programme, in 2014 the University made major methodological efforts:

- organization of activity on the development of the Programme in the institutes and departments;
- maintenance of the database of institutes' curricula in compliance with the educational standards;
- development of recommendations for implementing curricula of programmes;
- document preparation for opening new profiles of Bachelor's programmes and new programmes for Master's courses;
- posting methodological materials on the University's web-site;
- calculation of workload of the teaching staff with the help of the system "HEI's Workload" in all the types of academic workload of the HEI;
- acquisition of a new license and new certificate of the State Accreditation with appendixes; preparation and submission of documents for reissuance of license appendixes, in view of changing study programmes' codes, to the Administration of the Federal Service of Supervision in Education and Science.

In 2013-2014 the Educational and Methodological Board conducted 10 meetings on issues of introduction of on-line technologies to education, accreditation, starting new programmes,

developing new educational environment for training specialists of new generation on the basis of practice-oriented training, creation of basic departments and other.

Since 2014 the University has been conducting methodological workshops with Institutes' Directors, heads of departments, chairmen of methodological boards and all interested parties.

In compliance with the concept of the new portal of informational library complex in 2014 the University developed software for implementing new services (on-line consultation of bibliographers, "Virtual Reference" service and other), integrated the system of accounting electronic resources, started transferring components of informational library system to a new platform. By the end of the year the Electronic library included 14 800 documents.

Copies of all the fundamental documents of the study programme, which include the curriculum. Orders, instructive materials, etc., are kept by the Programme's coordinator. Students have an opportunity to review the documents upon request. As and when necessary, the Institute conducts meetings of the Programme's coordinators from both parties with those who are interested in entering the Programme, in order to provide information and answer questions. Besides, the coordinators hold organizational meetings. In the process of training the Programme's coordinator provides tutor support. Students also have access to on-line consultations on the basis of electronic platform Moodle.

The Peer Group notes that a complete package of documents, which provides transparency of requirements, is developed and approved by the University.

3.5 Gender equality and equal opportunities

3.5.1 Gender distribution

The Department's teaching staff consists of 78 teachers: 40 male and 38 female teachers. Persons in charge of the Programme's implementation are a male and a female. The Institute's Director is female. 11 females and 16 males are Professors. Gender ratio is also well-balanced. Female Professors are not familiar with the "glass ceiling" effect, for it is not difficult for them to combine family and career. The Department trains 907 students: 460 young men and 447 young ladies. Male applicants submit applications to specialties, which promise high income after graduation.

3.5.2 Benefits

Benefits are available to students in difficult life situations. This category of students includes orphans, special needs students, student families and single parents. One of the measures is the individual study plan, which, as a rule, provides an opportunity to extend the study period. The study period for students in difficult life situations is extended up to one year. In case of pregnancy, the study period may be extended up to one year per one child, but not more than two times. It

is important to differentiate one-time measures of assistance, for example, assistance in searching accommodation, and continuous support – social scholarships. Apart from this, there are three categories of assistance: social, material and infrastructural. Social assistance includes providing students with consultations and information. Financial aid e includes social scholarships. 25% of the scholarship monetary fund is paid to students in difficult life situations. Infrastructural assistance includes, for example, granting a family dorm room. At the moment, the Programme does not have special needs students.

Students may address their questions, concerning social assistance, to the deputy director for academic affairs. She/he informs students on social bodies, which are in charge of social assistance. In case of problems, which affect the academic progress, students are welcome to go for assistance to the course tutors– specially assigned teachers. According to the interviews with female students and teachers, maternity does not prevent from studying. Information and consultations are easily available. Assistance is delivered immediately.

3.5.3 Scholarships

All first-year students receive minimal scholarship. After the first year of study scholarships depend on students' academic performance.

Students, who show excellent academic performance or participate in volunteer activities, may by awarded additional financial assistance. They may fill in on-line applications for various scholarships. Information on time terms, types and amount of grants is available at the web-page. The Students' Council reviews the documents, the Examination Office checks academic performance; both bodies give assessment marks. The rating list of candidates is formed on the basis of the marks and is published. Students, who are on the top of the list, are awarded the grants. Students have the opportunity to appeal the decision. In this case, their documents are reviewed. This system is consistent and preferable for students. The Peer Group does not recommend publishing the rating list, the list should be available for the applicants only; it makes the procedure transparent on the one hand, and on the other hand, applicants, who failed to receive scholarship, do not become publicly known. The Institute also helps students to find part-time employment according to their specialty and actively interacts with employers – these measures provide the University's graduates with a good opportunity for self-fulfillment.

3.6 Conclusions:

The Peer Group would like to emphasize the strengths of the Programme:

- Sufficient equipment of the University and the Programme's Department; double degree students have access to modern equipment, library stock in SPbPU and Mikkeli University of Applied Sciences.

- The University carries out obligations of further training of the teaching staff; specifically, improvement of level of foreign language proficiency (preference is given to the English language).
- The teaching staff of the Institute actively participate in international cooperation activity.
- Teachers take an active part in developing training manuals and methodological materials.
- The University possesses sufficient and adequate resources (libraries, laboratory equipment, buildings) for implementing the Programme.
- Availability of hard and electronic resources in Russian and foreign languages, specifically, English and German languages.
- Students participate in conferences, competitions and olympiads.

The weakness of the Programme is that students should learn more about positioning and research achievements of the University in combination with the unique aspects of the Programme and correspondent achievements.

3.7 Recommendations of the Peer Group:

1. It is necessary to improve students' participation in the management of training (equal partnership).
2. It is recommended to improve employment opportunities in the native country (founding grants for returnees).

4 Quality management

4.1 Organization and quality assurance mechanisms

4.1.1 Organization

SPbPU has its own system of quality management. In the framework of the Programme's management the University uses information systems, oriented to supporting the study process, specifically forming informational and communicational environment, which provides transparent delivery of computer, communication and information services. In this regard, the University solved several tasks:

- improving availability of IT-resources through their accessibility on mobile devices;
- enhancing computation capacity of supercomputer systems;
- developing the automated information management system (hereinafter referred to as AIMS) on the basis of general software platform.

- In 2015 the University made major efforts in the following areas:
- the new web-portal was designed: the web-site structure and navigation blocks were revised;
- on the basis of the structure scheme the University developed new interface, enhanced scalability and the web-site modularity with the help of web-frameworks. Using flexible modular grid made the web-site available on a wide specter of gadgets: from mobile phones to wide screen displays, preserving the provided capability set without changes;
- in 2015 the University continued working on the implementation of information system "Galaktika ERP for University" on the basis of platform "Galaktika ERP" and "Galaktika Class Schedule" on the basis of platform "Galaktika Xafary";
- the module "Students' Academic Performance" was put in service; the University tested the setting up Masters' diplomas; the module "Study Plans and Workload" on the platform "Galaktika Xafary" was tested.

At the moment the system has 26756 subscribers.

4.1.2 The internal quality assurance of the study programme

The internal quality assurance of the Programme is conducted through monitoring the Programme, which covers all the basic aspects of the Programme's implementation and is conducted with the purpose of improving and assuring the training quality. Project review groups are formed for the purpose of the Programme's monitoring. The monitoring results are available in the digest "Quality Management in the Polytechnic University", they include the results of survey forms processing, diagrams and tables; the list of discovered unconformities of the study process; suggestions of the project team on improving the study programme.

The result of monitoring bear on the activity on the Programme's revising. Procedures of the Programme's revising comply with the standards of quality management "Renewal of Basic Study Programmes (revision, amendment, review)" with the use of the methodology "Monitoring Basic Study Programmes".

In order to control academic progress quality the University uses all types of internet-testing, which are provided by the Research Institute of Educational Quality Monitoring. The results of the internet-testing, which was conducted in 2014-2015 academic year are available in the digest "Quality Management in the Polytechnic University". In 2014-2015 academic year the University executed several types of internet-testing: diagnostic testing of the first-year students, federal internet-examination for the graduates of Bachelor's programme (main phase), federal internet-

examination in the sphere of professional education, internet-simulator in the area of education, open international students' internet-Olympiads.

Internet-testing is considered to be the most important stage of educational quality monitoring and an element of improvement of efficiency and quality of higher education services.

Decisions, which are connected with providing and developing quality, are taken on the basis of self monitoring and external reviews results. All activities are conducted in compliance with the approved plan of activities on preparing the Federal State Autonomous Educational Institution of higher Education "Peter the Great Saint – Petersburg Polytechnic University for developing, implementing and certifying quality management system in education for compliance with ГОСТ ISO 9001-2011 (ISO 9001:2008).

In December 2014, according to the audition plan the University conducted a certification audit by LLC "Test-St.Petersburg"; unconformities were not discovered.

The Peer Group notes that the University designed a plan for involvement of SPbPU's institutes in developing quality management system with prospective certification of the system.

4.2 Follow up on the results of quality assurance procedures

Certification of the University's quality management system is now covering three spheres of the University's activity:

1. delivery of educational services in programmes of higher education, which are carried out according to the University's license;
2. delivery of educational services in programmes of further education, which includes professional retraining and further training;
3. execution of fundamental and applied research into the area of natural and technical sciences, social and humanitarian sciences according to the University's profile.

The foundation of the quality management system in the area of educational activity on the basis of ISO 9001 requirements is the University's strategic decision. Such a decision came in response to the need of improving the HEI's management system in order to provide high level of quality of competitive study programmes in conditions of the contemporary state of economy and dynamic changes of markets' requirements. Quality management system model ISO 9001 provides an opportunity to account for such factors as changing market requirements, quality of delivered services, performance and effectiveness indexes for running processes, consumer feedback, specific goals of the HEI, optimization of HEI's management structure.

Work on the implementing quality management system of SPbPU's academic activity, according to the University's license, started in January 2014. The University decided to implement ISO 9001

requirements on the basis of particular structural subdivision – the Institute of Civil Engineering. The University approved the Rector's order "On preparation to the certification of quality management system of SPbPU's academic activity" and the action plan of preparation for developing, implementing and certifying the quality management system of SPbPU's academic activity. In 2014 SPbPU successfully passed the certification procedure, it was awarded the certificate of compliance with the national system ГОСТ Р, certificates of the network of world-leading certification bodies IQNet and the certification body, which is accredited in international accreditation system IAF. All the University's processes, which are executed "at sites listed in certificates' annexes", are distinguished with conformity marks of quality management systems.

The article, which was published in March 2015 in newspaper "Polytehnik", "Quality is a permanent requirement" is the additional confirmation of the University's effectiveness. The article presents information on the stages of preparation to certification audit of academic activity of a particular structural subdivision – the Institute of Civil Engineering. The article describes advantages of creating a quality management system of academic activity, results of pre-certification monitoring, activities on improving the quality management system.

The University pays great attention to internal mechanisms of quality assurance of professional education (internal control), which is delivered by the HEIs. Internal quality control in SPbPU (elements of the quality management system) is executed on the basis of the complex evaluation methodology, which includes:

1. analysis of monitoring indexes of effectiveness of SPbPU's Institutes,
2. internal rating,
3. indexes of passport of the University's academic departments.

The results of complex evaluation of the institutes are presented in the annual digest "University ratings and complex evaluation of SPbPU's Institutes according to the monitoring indexes of effectiveness, departments' passports and internal rating" of the series "Quality Management in Polytechnic University".

The University is awarded the Certificate for FSAEI HE SPbPU of 13 October 2014 No. 404. It confirms that a level and a quality of training, retraining and further education meets the requirements to include the educational institutions into the register of the Chamber of Commerce and Industry of the Russian Federation.

The Quality Management Centre reviewed the structure and records of administration practices of the University, analysed documents (external regulations, the University's bylaws, File Register, etc.), compiled the list of internal and external documents, which became the basis for description

of processes model of SPbPU's quality management system. As a result, the structure of the University's documentation has been brought into compliance with the ISO 9001 requirements.

The principal document, which describes the implementation of the standard's requirements, is "Quality Guidelines". The Quality Guidelines were developed with a due account of changing requirements of the labor market, necessity of academic quality improvement, optimization of the University's management structure. Approbation of the University's quality management system in the Institute of Civil Engineering and other structural subdivisions, which participate in the academic process, was executed in 2013/2014 academic year.

The execution of events, targeted at researching requirements and customers' satisfaction (students, graduates, employers), has become one of the priority focus areas. The University conducted a survey of a great number of respondents from all interested parties of educational activity. The definition of policy and goals in the area of quality of educational activity became the result of the accomplished stage.

The University conducted surveys of all groups of respondents – all stakeholders of the educational process (students, employers, graduates, applicants, and teachers). The monitoring of the study programme results in compiling analytic reports, developing recommendations for improvement, which are necessary for enhancing the training quality; planning actions, necessary for improving the level of the study process implementing. Detailed information on the monitoring of the Institute's study programmes is published in the digest "Quality Management in the Polytechnic University".

The Peer Group is of the opinion that the complex of measures presented above provides every opportunity for achievement of the determined goals and guarantees the compliance of methods and techniques of implementing the study programme with the accepted management concept. Development of the quality management system is one of the strategic goals of the University. Quality management is considered as a systemic coordinated activity in the management of the HEI's goals in the sphere of quality, which includes functions of planning, management, provisioning and continuous improvement.

Apart from that, the quality management system promotes the enhancement of efficiency of the HEI management by means of:

- analysis of demands of the labor market and educational services, monitoring of changes of consumers' requirements, immediate and adequate reaction to the changes;
- development of the goal system in principal activity areas (goals in the sphere of quality), design of plans and formalization of processes for achievement of the goals;
- reduction of costs for achievements of goals in the sphere of quality;

- provision of necessary resources for achieving target performance;
- improvement of promptness of information delivery (information system "Contingent", "Dekanat", etc.);
- objectiveness of decision making on the basis of continuously extended database on the statistic indexes of the HEI's activities; increase of informational content about the University on SPbPU's official web-site;
- clear division of responsibilities and powers between managers of processes and performers of work;
- improvement of performance discipline, accountability of employees of various levels for made decisions and conducted actions;
- continuous monitoring of consumers' satisfaction with the quality of educational services and research products, which includes using internet-resources (forums), developing activities on improvement of consumers' satisfaction; design of suggestions on correcting and preventive activities.
- Activities on improving the University's quality management system are included into annual Development Plans for the Quality Management System.

4.3 Conclusions:

The strong side of the programme is the University's quality management system and its continuous modernization.

Weaknesses of the Programme are: Existing system of quality assurance does not fully account for certain study programmes and courses of programmes, specifically, insufficient feedback between teachers and students on assessment within the framework of study courses.

4.4 Recommendations of the Peer Group:

1. It is recommended to improve measures of quality assurance at the level of the study programme. Specifically, it is necessary to guarantee discussions of teachers and students on the assessment of students' academic performance. It is also important to note valuation in case of poor academic progress.
2. It is recommended to more actively involve employers and labor market representatives in revising the study programme's goals and supply employers with more extensive information on the double degree programme.

3. It is recommended to provide students with the opportunity to express their opinion on the extent and the type of knowledge assessment, specifically if they consider assessment procedures to be "fair".

4. It is recommended to conduct periodical reviews of study programmes.

5 Conclusion

The Study programme is conceptually well thought over and is being successfully implemented. The educational content on the whole is fit for purpose and makes it possible for the students to work in research centres and construction companies upon completion of the programme.

The experts also noted the fact that the Bachelor's study programme provides solid preparation of the graduates for the next step – a Master's programme.

The key modules provide a comprehensive preparation of students as they are aimed not only at improving theoretical knowledge but also at acquiring practical skills with the help of practical and laboratory classes (including work placement in construction companies), and research work under the supervision of research consultants.

The experts specifically mentioned that strength of the Programme is its scientific orientation of the study programme, which provides for doing a lot of research during the study period. The students do research during the study of various disciplines. The reports on the research outcomes are presented in the form of library research papers, articles, etc. However, the Peer Group pointed out that the research topics of some disciplines need to be more specific.

The curricula of the study programme are reviewed and updated every year, to include enhanced teaching of foreign languages.

Without any doubt, the high qualification and professionalism of the teachers contribute to the successful implementation of the Programme.

The lecture rooms, laboratories, and bases for work placement meet the necessary requirements. The Peer Group points out to the following strengths of the Programme:

The Rector and the management of the University are very committed to ensuring the successful implementation of the Programme. At the same time they are very efficient in reacting to the problems emerging in the context of academic performance and work.

- The Programme fully complies with the HEI's mission in internationalization
- The Programme includes utilization of academic and research approaches.
- Students and teachers interact in the spirit of cooperation. Adequate teachers/students ratio (1:5) facilitates the cooperation.

- The internal evaluation of programmes and the possibility availability of curriculum adjustment to the labor market requirements are good practices.
- The procedures of the Programme revision at the department level makes it possible to further develop and improve the Programme.
- The evaluation of expected learning outcomes is at a high level. The University has various types of control, which are based on competencies and oriented to applied aspects of the programmes, specifically project activity.
- Intermediate assessment guarantees continuous feedback between teachers and students.
- The Programme includes cooperation with a Finnish University, thus enhancing the students' mobility.
- The University carries out its obligations of further education of the teaching staff; specifically, improving a foreign language proficiency (preference is given to the English language).
- The teaching staff actively participate in international cooperation.
- The teachers take an active part in developing training manuals and methodological materials.
- The University possesses adequate and sufficient resources (libraries, laboratory equipment, buildings) for implementing the Programme.
- Availability of printed and electronic resources in Russian and foreign languages, specifically in the English and German languages.
- Students participate in conferences, competitions and olympiads.
- The University presented a great amount of documental evidence, which contains all the necessary information. The Self-Evaluation Report includes the basic principles of the Programme's implementation.

6 Recommendations for the Accreditation Commission of ACQUIN and the National Accreditation Board of NCPA:

The Peer Group recommends the following decision: **Accreditation with conditions**.

Annex 1

7 The scale of assessment parameters of the study programme

No	NCPA Standards	Assessment of the study programme			
		Full compliance	Substantial compliance	Partial compliance (needs improvement)	Non-compliance
1.	Policy (mission, vision) and procedures for quality assurance		+		
2.	Approval, monitoring and periodic review of study programmes	+			
3.	Assessment of student learning outcomes (competencies)	+			
4.	Quality assurance of teaching staff	+			
5.	Learning resources and student support	+			
6.	Information system providing effective implementation of the study programme		+		
7.	Public information			+	

8 The scale of assessment parameters

Full compliance. The Review Panel members consider the study programme (a cluster of programmes) under review fully compliant with the requirements with regard to a particular criterion (standard) The indicators are clearly determined and related to the mission, regularly reviewed and upgraded. The experience and practices can be recommended for dissemination.

Substantial compliance. The Panel members consider the study programme (a cluster of programmes) under review fully compliant with the requirements with regard to a particular criterion (standard). The indicators are determined clearly enough and correlate with the mission and users' requirements.

Partial compliance. The Panel members think that with regard to a particular criterion (standards) the compliance has been achieved, but the level of compliance is not high enough. The indicators are determined in a general way and documented, clearly related to the mission. The study programme (a cluster of programmes) has (have) closely approached the threshold level of compliance with the NCPA Standards.

Non-compliance. The Panel members consider that the study programme (a cluster of programmes) under review fails to comply with the NCPA accreditation requirements. Activities are carried out at a low or poor level of quality, there are a lot of deficits and problem

areas, the indicators are not clearly determined. The deficits have a negative influence on the realization of the programme's mission. The Panel gives necessary recommendations for the correction of the revealed weaknesses.

IV Decisions of the Accreditation Commission of ACQUIN

1 Accreditation decision

On the basis of the report of the expert group, the statement of the HEI and the statement of the Standing Expert Committee, on March 31st, 2016, the Accreditation Commission of ACQUIN takes the following decision:

The double degree study programme „Construction" (Bachelor) is accredited with the following condition:

- **The programme's documentation is not transparent and contains insufficient information on the programme's structure. Beyond that, available documents are not reliable, because they do not describe the current status of the programme. It is recommended to provide documents, which describe the real concept of the programme. Documents are expected to cover the programme's structure, specifically, the total amount of credits awarded in the partner-HEIs, formal rules of recognition of competencies, which are acquired during the period of study in the Finnish University. Besides, it is recommended to provide a description of the programme's current modules.**

The accreditation is limited until December 31st, 2017. In case of stating the fulfilment of conditions by the Accreditation Commission after submitting documents not later than April 1st, 2017, the study programme will be accredited until September 30th, 2021. The accreditation is not prolonged if there is no evidence for the fulfilment of conditions.

The accreditation procedure can be suspended by request of the HEI for up to 18 months, if there is the prospect that the HEI is able the correct deficits within this period. A statement of the HEI requesting a suspension has to be submitted to ACQUIN by May 20th, 2016.

For the further development of the study programme the following recommendations are given:

- It is recommended to more actively involve employers and labor market representatives in revising the study programme's goals and supply employers with more extensive information on the double degree programme.
- It is recommended to improve measures of quality assurance at the level of the study programme. Specifically, it is necessary to guarantee discussions of teachers and students on the assessment of students' academic performance. It is also important to note valuation in case of poor academic progress.

- It is recommended to more actively track graduates activity after graduation and collect information on their employability. In order to do this, it is recommended to create a graduates' network.
- It is necessary to increase student participation in the management of education (equal partnership).
- It is recommended to enhance the students' orientation to working in construction companies.
- It is recommended to conduct periodic reviews of study programs.

The Accreditation Commission changes the proposal of the expert group as follows

Reformulation of a recommendation into a condition:

- The programme's documentation is not transparent and contains insufficient information on the programme's structure. Beyond that, available documents are not reliable, because they do not describe the current status of the programme. It is recommended to provide documents, which describe the real concept of the programme. Documents are expected to cover the programme's structure, specifically, the total amount of credits awarded in the partner-HEIs, formal rules of recognition of competencies, which are acquired during the period of study in the Finnish University. Besides, it is recommended to provide a description of the programme's current modules.

Justification:

As recommended by the Standing Committee of Experts, this recommendation is reformulated as a condition. Transparency and correctness of the relevant documentation are a basic necessity for a study programme with international orientation. It is important for the students that the HEI delivers this documentation in the provided time frame.

2 Fulfilment of conditions

The Higher Education Institution has submitted the documents that prove the fulfilment of the conditions in due time. These documents have been forwarded to the Standing Expert Committee with request for examination. The Standing Expert Committee came to the conclusion that the condition is fulfilled.

Based on the statement of the Standing Expert Committee, on March 26th, 2018 the Accreditation Commission of ACQUIN took the following desicions:

The condition of the study programme "Product Design" (B.A.) is fulfilled. The accreditation period is extended until September 30th, 2021.