Immanuel Kant Baltic federal university

National Centre of Public Accreditation

FINAL REPORT

EXTERNAL REVIEW OF THE STUDY PROGRAMMES IN

Information Communications Technologies and Communication Systems

delivered by the Immanuel Kant Baltic Federal University

Kaliningrad, 2012

National Centre of Public Accreditation

REPORT ON EXTERNAL REVIEW

of study programmes

210700.62 "Multichannel Telecommunications",
210700.68 "Aerials and microwave devices",
"Telecommunication electronic system design and production technologies"
in study field
"Information communications technologies and communication systems"
delivered by the Immanuel Kant Baltic Federal University

Chair of Review Panel  V. Gurov

Kaliningrad, 2012

TABLE OF CONTENTS

EXECUTIVE SUMMARY

The external review of 210700.62, 210700.68 study programmes in "Information communications technologies and communication systems", delivered by the Immanuel Kant Baltic Federal University was carried out during the period October, 1 2012 to December, 7 2012, involving self-evaluation and production of self-evaluation report, site visit the External Review Panel, and preparation of the present report.

The main purpose of this process was to analyze whether 210700.62, 210700.68 study programmes in "Information communications technologies and communication systems" meet the Standards and Criteria for Public Accreditation developed by the National Center of Public Accreditation in accordance with the ESG-ENQA (hereinafter – NCPA Standards).

The Final Review Report provides the basis for a decision on public accreditation against the European standards of quality assurance in education. The main goal of public accreditation is to enhance quality of education and to promote quality culture in education institutions, to identify best practices of ongoing improvement of educational quality, as well as to ensure public provision of information about education institutions delivering study programmes in accordance European standards of educational quality.

1 CONTEXT AND MAIN STAGES OF THE REVIEW

1.1 Reasons for the commissioning of the review

Article 33.2, Point 41 of the Law of the Russian Federation "On Education" of 8 November 2010 №293-ФЗ stipulates that education institutions have the right of undergoing public accreditation conducted by Russian, foreign, or international educational, scientific, public, or other organizations. Information on the outcomes of such accreditation shall be considered in the state accreditation review process.

To undergo public accreditation procedure regarding 210700.62, 210700.68 study programmes in "Information communications technologies and communication systems" the Immanuel Kant Baltic Federal University applied to the National Center of Public Accreditation (NCPA) carrying out its activities at the national level and recognized by the leading international organizations of quality assurance in higher education[1].

1.2 Composition of the External Review Panel

The National center of Public Accreditation (NCPA) was responsible for the review process coordination, as well as for selecting and appointing the members of the External Review Panel.

The review Panel consisted of three foreign and four Russian members and included:

[1] The Central and Eastern European Network of Quality Assurance Agencies in Higher Education CEENQA (full membership); The Asia-Pacific Quality Network APQN (full membership); The International Network for Quality Assurance Agencies in Higher Education INQAAHE (associate membership); The European Network for Quality Assurance in Higher Education ENQA (associate status).

- **Victor Gurov** - Doctor of Technical Sciences, Professor, Rector of the Ryazan State Radio Engineering University (Ryazan, Russia) - Review Chair - e-mail: gurov.v.s@rsreu.ru;
- **Rimma Akhmetsafina** - Candidate of Technical Sciences, Associate Professor, Deputy Head of the Department of Software Engineering, Faculty of Business Informatics, National Research University - Higher School of Economics (Moscow, Russia) – Panel member - e-mail: rakhmetsafina@hse.ru;
- **Peeter Normak** - Doctor of Mathematical Sciences, Professor of Informatics, Director of the Institute of Informatics, Tallinn University, Member of the Information Technology and Telecommunication skills council of Estonian Qualifications Authority (Tallinn, Estonia) – Panel member - e-mail: peeter.normak@tlu.ee;
- **Jerzy Marcinkowski** - Dr. habil., Professor, University of Wroclaw, Former member of the Polish State Accreditation Committee (Wroclaw, Poland) - Panel member - e-mail: jma@cs.uni.wroc.pl;
- **Elisa Sayrol Clols**– PhD, Associate Professor, Department of Signal Theory and Communications, School of Telecommunications Engineering of Barcelona (ETSETB), Universitat Politècnica de Catalunya. Barcelona Tech. (UPC) (Barcelona, Spain) - Panel member - e-mail: elisa.sayrol@upc.edu;
- **Vitaly Knyazev** – Postgraduate student, Chair of Management Systems and Computer Engineering, specialty "System analysis, management and processing of information", Kaliningrad State Technical University (Kaliningrad, Russia) - Student member - e-mail: vitaly.knazev@gmail.com;
- **Igor Korolyov** – Leader of the network management team, Regional Centre for communication network management, branch of "Rostelecom" (Kaliningrad, Russia) - Professional practice representative - e-mail: i.korolev@kl.nw.rt.ru.

1.3 Goals and objectives of the review

The review of study programmes in "Information communications technologies and communication systems" delivered by the Immanuel Kant Baltic Federal University was aimed at:

- evaluation of the effectiveness of 210700.62, 210700.68 study programmes in "Information communications technologies and communication systems" and assessment of the level of their compliance with the NCPA Standards;
- provision by the Panel of a number of recommendations which could assist the programmes under review in further development and quality enhancement.

1.4 Stages of review

The review took place over 3 main stages. These were:

- self-evaluation procedure
- site visit by the External Review Panel to the Immanuel Kant Baltic Federal University
- preparation of the report on results of the external review.

2.4.1 Self-evaluation

The Immanuel Kant Baltic Federal University was responsible for carrying-out self-evaluation and preparation and timely submission to NCPA of a self-evaluation report.

In accordance with the NCPA Guidelines for Conducting Self-Evaluations at the Programme Level, the self-evaluation report included summary, results of self-evaluation and conclusions.

According to the schedule of evaluation procedures the self-evaluation report was timely submitted to NCPA and the Panel members.

Analysis of the self-evaluation report showed that the Bachelor's and Master's Degree programmes in "Information communications technologies and communication systems" have been delivered at the Faculty of Physics and Engineering since 2000. The Faculty of Physics and Engineering was established on the basis of the Faculty of Physics and Mathematics (1977), then the Faculty of Physics (2009). Now the Faculty includes four majoring departments. The Dean of the Faculty of Physics and Engineering is Professor A. Ivanov, the Head of the Academic Council of the Faculty is Professor V. Zakharov, the Head of majoring Department of Telecommunications and major educational program manager is A. Shpilevoy, Associate Professor.

Training of Bachelor's Degree students is carried out in "Multichannel Telecommunications", Training of Master's Degree students is carried out in "Aerials and microwave devices" and "Telecommunication electronic system design and production technologies".

The self-evaluation report includes introduction, general information, information on compliance with public accreditation standards (findings of the self-evaluation procedure), and conclusions.

The Panel points out the fact that annexes to the self-evaluation report were available only in Russian, which was an obstacle for their analysis by foreign members of the Review Panel. Besides, the report did not contain full information on the study programmes, so the Panel had to clear some issues during the meetings and interviews.

The Panel would like to stress that self-evaluation would have been more efficient if it was carried out basing on SWOT analysis of study programmes against every NCPA standard.

2.4.2 Site visit to the Immanuel Kant Baltic Federal University

The review Panel was visiting the Immanuel Kant Baltic Federal University from 29 to 31 October 2012 in order to verify the validity of information contained in the self-evaluation report and to gather additional evidence concerning delivery of the study programmes under review and their compliance with the NCPA Standards.

Dates and the schedule of the site-visit were determined by NCPA and approved by the Administration of the Immanuel Kant Baltic Federal University and the External Panel members.

In the course of the visit the Panel members requested documents which they needed to check.

The Chair of the Panel coordinated the work of the Panel.

Efficient communication with NCPA staff at the stages of preparation and implementation of the site visit should be noted. The work of the Panel was held in the atmosphere of mutual interest and cooperation of experts and the Administration of the Faculty of Physics and Engineering. Over 40 people took part in meetings with experts: representatives of employers and professional community, students, teaching staff and Administration.

During the site visit the Immanuel Kant Baltic Federal University provided administrative support to the Review Panel, including organisation of meetings and interviews, provision of rooms, computers with access to the Internet.

In the end of the visit the Panel presented a short oral overview report to the staff of the Immanuel Kant Baltic Federal University, which contained major conclusions.

The schedule of the site visit is available in the Annex.

2.4.3 Evaluation report

The evaluation report was prepared by the Panel basing on the findings of the review of the study programmes in "Information communications technologies and communication systems" delivered by the Immanuel Kant Baltic Federal University, which was submitted to the National Center of Public Accreditation.

The draft report (sixteen pages, excluding annexes), was drawn up by the Panel Secretary, Rimma Akhmetsafina, and submitted to the Immanuel Kant Baltic Federal University Administration to check for factual errors. The Panel finalized the report after making the necessary factual corrections, and sent it to the National Center of Public Accreditation.

2 ESCRIPTION OF THE STUDY PROGRAMMES

The following study programmes in "Information communication technologies and communication systems" (210700) have undergone evaluation procedure: "Multichannel Telecommunications" (Bachelor's Degree programme), "Aerials and microwave devices" (Master's Degree programme) and "Telecommunication electronic system design and production technologies" (Master's Degree programme).

The goal of the study programmes is to build up general cultural and professional competences in compliance with the requirements of the Federal State Educational Standard for Higher Professional Education. Every study programme is elaborated with regard to needs of labour markets and employer requirements to professionals.

Curricula are elaborated with regard to the University mission and goals of the study programmes, as well as competency-based approach of the Federal State Educational Standard for Higher Professional Education and its requirements to content, level of training of graduates and of development of general and professional competencies. Competencies, additionally suggested by employers were taken into account in the process of making curricula. The study programmes fully cover components of Federal Educational Standards, stipulate elective courses, which allows taking into account needs of modern labour market and society, specifics of education and students' interests. Subject specific plans and programmes are reviewed annually. Points requiring modification are discussed and approved at department meetings and Academic Council of the Faculty.

Curricula are based on the multilevel education principle; subject specific plans of every level stipulate advanced study of professional and special disciplines at further level.

Expert analysis of definitions of the outcomes of the study process has shown that they are not sufficiently correlated with knowledge, skills and competencies acquired after completion of the study programme.

Procedure of evaluation of level of students' knowledge at the Faculty is established with regard to estimated learning outcomes and corresponds to the goals of the

study programmes. The system of assessment during interim attestation of students, its forms, order and frequency are indicated in the statutes of the Immanuel Kant Baltic Federal University.

3 FINDINGS OF THE EXTERNAL REVIEW OF STUDY PROGRAMMES

3.1 Standard 1. Policy (mission, vision) and procedures for quality assurance

The Programme for Development of the Immanuel Kant Baltic Federal University for years 2011-2020 (http://www.kantiana.ru/federal/progamm_bfu/index.php), approved by the Government of the Russian Federation in 2011 contains the mission of the University, presents the strategy for development, goals and objectives. The programme includes the "Information communication technologies and communication systems" as one of the top priority programmes, important for development of the University.

The basic Bachelor's and Master's Degree study programmes in "Information communication technologies and communication systems" contain objectives of the study programmes. The goal of the basic study is formation of competencies of the graduates for their professional activity (further list of competencies contained in the Federal State Educational Standards). The indicated goals and strategy for development of the study programmes are of declarative nature. Methods for their implementation are not presented in the study programme.

Existence and comprehension of the goals and of the programme for development of the faculty, departments, of the study programmes are the foundation for their development, however the Panel has not received any document which would present an outlined strategy for development of the Faculty and Departments. The Panel has come to conclusion that the interviewed stakeholders did not understand the strategies and goals of the University as a whole, or of the Faculty and the study programmes.

The Panel stresses the interest in development of study programmes shown by all stakeholders. The University Administration plays an important part. The Panel is glad to point out the fact that professional practice representatives show interest in participation in establishment of the study programme, setting its goals and ways for development. The representatives of the business society clearly understand that the necessity of fundamental training of the students for successful professional activity. Employers assist the Faculty in training students, delivering classes with the use of modern equipment on their sites. Besides the business community participates in establishment of the list of themes for graduation projects and papers, basing on their needs for solution of current problems, requiring research, design, etc.

However the Panel has identified the problem of inefficient mechanisms of influence on development of the study programme on the part of the teaching staff and students.

The Panel would like to point out certain detachment of the teaching staff of departments, of the Faculty Administration on the one hand from the University Administration on the other hand. Absence of common understanding of goals and means for development of study programme and of mutual interests of the sides prevents efficient implementation of the strategy for development of the Immanuel Kant Baltic Federal University in general and of the Faculty of Physics and Engineering in particular.

The Panel was provided with the results of monitoring which is held by the University once every two years for the purpose of students' evaluation of the study process in the whole University.

The Panel points out the fact the Faculty implements the traditional system of quality assurance, which is not regulated and lacks clear indices. At the same time the Panel underlines high proficiency of the teaching staff and their aspiration for education quality enhancement. Some educators have organized the feedback channel with the students. They monitor the quality of the study process, of teaching of the discipline to Bachelor's and Master' Degree programmes students and use the results in the teaching process.

Establishment of the quality assurance system will enhance efficiency of the study programme.

Compliance with the standard: *partial compliance*

Recommendations:

1) Goals and strategies for development of the study programmes must be clearly articulated in documents;
2) The main documents (Federal State Educational Standard, basic study programmes, basic curricula and subject specific curricula, etc.) must be published in the web sites of the Faculty/Department and the English version of the University, Faculty and Department web site;
3) Campaigns for promotion of the Federal University corporate culture must be carried out, all stakeholders should participate in elaboration of the goals and strategy for development of the study programme.
4) Regular (twice a year) anonymous electronic surveys among the students must be held to evaluate the quality of the study process, teaching of all disciplines with possibility to leave comments.
5) Regular (annual) social surveys among students and teaching staff must be held.

3.2 Standard 2. Approval, monitoring and periodic review of study programmes

Basic study programmes in 270100 are annually reviewed (Annex 2 to self-evaluation report). They are elaborated of the basis of the Federal State Educational Standards for 210700 - "Information communication technologies and communication systems". The University has not used the possibility of elaboration of its own standards for these programmes yet.

Subject Specific plans, as well as subject specific programmes are revised annually. The panel had an impression that the authors of the programmes do not clearly understand the difference between the goals and results of the study programme on the one hand and the content of the discipline on the other hand. The study process is not in general goal-oriented yet. Actually a classic approach is used when an educator passes knowledge in particular discipline and assesses the outcomes.

Subject specific plans and programmes were presented to the panel in a hard copy format.

Curriculum of the Bachelor's Degree study programme contains a big share of short courses (72 academic hours), and a lot of disciplines, which are included in the variable part but are of compulsory nature.

The subject specific programmes do not contain the competencies to be formed during the course of studies.

The panel points out positive experience of taking into account opinion of employers in elaboration of Bachelor's and Master's Degree study programmes in setting competencies of the graduates, establishment of the list of elective disciplines, field practice programmes, choice of themes for graduation projects and papers for Bachelor students and thesis for Master students.

Employer representatives annually take part in the work of the State Attestation Commission. A certain number of projects of students are carried out as a part of field practice and their results are introduced in production.

Employers give high estimation to the level of training of students in the given field. Students and graduates are as well satisfied of the level of qualification they attain.

It is not quite clear if the students' opinion is taken into account while elaboration of curricula. Students actually do not choose individual paths of education (elective disciplines), i.e. the same disciplines are delivered from year to year. Advance notice on the electives is not available. The panel was not provided with individual student work plans. So, in both Bachelor's and Master's Degree programmes the same programmes are delivered for all students.

The panel suggests (see the list of recommendations to Standard 1) to carry out student surveys and graduates as much as possible for their evaluation of teaching quality.

For the current monitoring of the basic study programme efficiency tests are used, which were created by the National Accreditation Agency of the Russian Federation. The Panel considers it insufficient, tests covering professional courses of the basic study programmes are practically never held. Besides, the existing tests are aimed at assessment of the learning outcomes. It is advisable to start elaboration of both tests for assessment of learning outcomes of professional cycle disciplines and competency oriented tasks.

Graduates of the Bachelor's Degree programme continue their studies in Master's Degree programme and later in post-graduate programme. The graduates are employed with Research and Technology Park of the Immanuel Kant Baltic Federal University; with leading telecommunication service provider companies of the region; with companies, located in Moscow and other major cities. Unfortunately, the Faculty does not have actual information on employability of all graduates; this data could serve as the basis for external monitoring of the study programme.

Data on internal evaluation of study programmes were not presented.

External evaluation is carried out in a form of regular state accreditation of the programme.

Voluntary participation in public accreditation is an evidence of the fact that the University searches for enhancement of quality of study programmes and learning outcomes. At the same time the self-evaluation report does not provide the indicators, which would allow evaluation of the study programme against this standard.

The Panel points out some inconsistency in the basic study programmes for Bachelor's Degree students, in particular point 2.1 – sphere of professional activity, 2.2 – subjects of professional activity, 2.3 – types of professional activity of a

graduate significantly differ from those indicated in the Federal State Educational Standards. Point 2.4 indicates tasks of professional activity of Bachelor's Degree students in Radiophysics.

Compliance with the standard: essential compliance

Recommendations:

1) The University should use the possibility of elaboration of its own standards a Federal University is granted with.
2) It is considered reasonable to rearrange the curriculum so that the courses were longer (108 academic hours), the greater share of disciplines was included in the elective cycle, and elective disciplines could be changed more often according to the needs of the modern labour market.
3) Content of disciplines of professional cycle should be regularly updated. Subject specific programmes should clearly outline learning outcomes.
4) Students should be granted with an opportunity to compile individual study plans allowing free choice of listed elective disciplines. The list of elective courses should be enlarged with regard to employers' and students' opinion.
5) The system of indexes and study programme efficiency monitoring on the basis of regular self-evaluation should be developed. The system should also use data on employers' opinions and employability of students.
6) Assessment tool sets should be elaborated, which would include tasks per discipline, including those of professional cycle, for different types of control (formative, summative, final), as well as interdisciplinary competency-oriented tasks.

3.3 Standard 3. Assessment of student learning outcomes (competencies)

Annex 2 of the self-evaluation report contains list of regulatory documents of the University which are a regulatory and methodological support of the students' learning quality evaluation system (Regulation on Graduation Projects and Papers, 2007; Regulation on summative and final attestation, 2009 and others). The Panel thinks it is important to update these documents according to the new status of the University (for instance, the procedure of assessment during final attestation is not complete).

Study process quality control includes traditional forms of control: tests, pass-fail tests, examinations, presentation of course projects/papers, final state attestation. Criteria of assessment are not represented in subject specific programmes.

Teaching qualification of the educators is sufficiently high, at the same time their scientific activity is not of a quite high level.

Students participate in research, present the results at conferences at both local and national levels. At the same time students do not participate in competition for the best student research project, grants. Students are not involved in financed research work. Student research work is not obligatory. Introduction of interdisciplinary course projects/paper, research seminars will encourage their activity in this sphere.

Master's Degree programme students must publish their works not only in local journals but also in international journals. For post-graduate students this must be an obligation.

The panel points out the absence of international student mobility. One of the reasons is insufficient level of knowledge of English or other foreign languages.

Compliance with the standard: partial compliance

Recommendations:

1) Interdisciplinary course papers/projects, scientific seminars should be introduced in curricula. It will be possible to do if the Baltic Federal University elaborates its own original standards.
2) Project and other active and interactive forms of teaching should be used.
3) Language courses for students should be intensified. The practice of presentation of graduation papers and projects in foreign languages should be introduced. English should be introduced in the Final State Examination.
4) Students should be encouraged to participate in international conferences and seminars.
5) Students should be informed of exchange programmes. They should be provided with support for taking internships in leading foreign universities.

3.4 Standard 4. Quality assurance and competencies of teaching staff

The composition of the teaching staff of the majoring department meets the requirements of Russian standards stipulating the quantity of Doctors of Sciences and Candidates of Sciences. However, the teaching staff members of the Department do not have any textbooks and training and methodological materials with a special classification (approved by Training and Methodological Associations to be published and used).

Although the faculty have high levels of expertise, many of educators are not actively involved in research activities. The Review Panel would like to point out that the number of funded research projects (grants) at the Department and the Faculty is not sufficient. .

The main reason for it is heavy workload of teaching staff members.

It is necessary to reduce faculty workload, especially to those educators who conduct research, and provide them with the opportunity to participate in international conferences. Another option is to reduce the workload in the curriculum, allocating more academic hours to students' individual studies.

The faculty's major area of interest is physical layer of telecommunication systems. It is advisable to increase the study of computer networks, use of telecommunication systems, especially mobile information technologies.

One of the strong features of the Faculty is involvement of practitioners in teaching.

Many educators do not use modern methods of education, e-learning system, which is definitely a weakness of the Faculty. In recent years students have not had any disciplines delivered in English.

The University has only a small number of educators from other universities. The University is not actively involved in inviting educators from HEIs beyond Russia. It's advisable to invite those educators who will be able to set up research groups at the University and supervise them.

The Review Panel considers that the faculty workload is too heavy. The Panel did not find any evidence that the Faculty has in place the system for monitoring and development of the quality of teaching.

Due to the new equipment provided, many disciplines have been reviewed. The Panel considers that this initiative should be supported by the University's leadership.

The Review Panel was not provided with any documentation concerning the system for monitoring and development of the quality of teaching.

The academic staff members can not improve their qualifications themselves, but the University is able to provide advanced training for faculty (internships in leading universities of Russia and beyond, internships in enterprises – leaders in the domain). Moreover, the Faculty should organize English courses for all teaching staff members.

The Department is not involved in international research activities. The faculty do not publish their scientific papers abroad, thus their international colleagues do not know about them. Only a few educators have participated in international conferences beyond Russia. The number of joint projects with foreign colleagues is limited. Postgraduate students are not familiar with foreign scientific journals.

Compliance with the standard: partial compliance

Recommendations:

1) develop efficient mechanisms aimed at encouragement of teaching and research activities of the teaching staff;
2) encourage improvement of qualifications of the teaching staff members (internships in leading universities of Russia and beyond, internships in enterprises – leaders in the domain; English courses);
3) provide incentives for educators to increase the number of their publications;
4) reduce the faculty workload;
5) introduce at least one discipline in English to the programme; encourage teaching staff members delivering their courses in English;
6) invite educators from other universities who are actively involved in research activities and thus will be able to coordinate research activities at the Faculty.

3.5 Standard 5. Learning resources and student support

All the University buildings are in good condition, the building of the Faculty of Physics and Engineering is currently under repairing. The number and areas of classrooms are small, so it's quite problematic to establish new programmes.

The Panel points out that the leading enterprises in this domain provide the University with the opportunity to conduct lessons in their laboratories, which have modern equipment.

The Faculty of Physics and Engineering has bought modern equipment which is being installed and started. However, the laboratories are very small. Besides, the number of support staff at the Faculty is not sufficient.

Some laboratory equipment needs upgrading.

New laboratories do not function efficiently, as they are almost not used. During the site visit the Panel found out that it was not always clear how to use new

equipment. The Panel recommends considering the possibility of cooperation with other HEIs in terms of using laboratory equipment.

The Faculty of Physics and Engineering does not have its own computer classroom. The classes are conducted in a corporate classroom with outdated equipment.

The University's computers are linked to the local network via Wi-Fi providing Internet access. However, the quality and the speed are very low.

The University library facilitates the study process. The library stock is kept in the University buildings. The Panel would like to point out that although the University has rich electronic resources, they are rarely used by the students and the teaching staff. The electronic resources available at the library provide great opportunities to find information on the latest scientific achievements.

Students are not provided with sufficient resources to work independently. It is necessary to allocate more classrooms including computer ones. The current number of classrooms is not sufficient; the computer classroom is equipped with outdated units.

The online system of education lms-2.kantiana.ru is being implemented rather slowly and with great difficulty. During the meetings with students and teaching staff members the Panel found out that they are not familiar with LMS or consider it to be inefficient and don't actively use it in the process of education. The faculty currently post materials once (with the help of the operator), whereas LMS is designed to support the everyday process of education, projects, discussions. The online system is being developed but the basic software and hardware of the system which enable its intensive use are already available.

The Faculty of Physics and Engineering offers a number of advanced training programmes (postgraduate education), but the Panel could not get familiar with the documentation.

The Panel did not find any evidence of availability of "accessible environment".

Student surveys are carried out twice a year. It is not clear whether these surveys are focused on the evaluation of the process of education.

Compliance with the standard: essential compliance

Recommendations:

1) establish a minimum of 2 computer classrooms at the Faculty of Physics and Engineering;
2) consider the possibility of cooperation with other education institutions in terms of using the laboratory equipment;
3) extend laboratories;
4) in order to make online resources more efficient it is necessary to provide students and teaching staff with training on the use of the e-library and the online system of education available at the University;
5) enhance the internet connection quality of the local University network;
6) fill in the online system with education materials;
7) carry out regular monitoring of the delivery of study programmes via an anonymous survey of students once or twice a year.

3.6 Standard 6. Information system providing effective implementation of the study programme

Education quality management system is subject to the University Regulations, Regulation on the University Internal Education Quality Assurance system (of October 23, 2007), regulations on University subdivisions. Elements of Quality Control are designed for constant upgrading of curricula and education environment, they are noted in the report on the results of self-evaluation carried out at the Baltic Federal University.

All the quality control procedures are subject to regulatory documents issued by the Baltic Federal University. Academic staff, students and graduates are involved in the process of assessment and quality assurance through participation in opinion polls, questionnaire surveys, etc. Their opinions are analyzed at the Academic Council's meetings, taken into account by Administration of the Institution of Modern Education Techniques while rating an instructor with the purpose of improving the quality of education.

Integration with the internal University electronic resources is carried out by the electronic document management system. There is the system for monitoring students which is called "Orders for the Students Groups". To keep track of the recent documents the document management portal of the Baltic Federal University is used. Computer-assisted information services are constantly being upgraded by the IT infrastructure administration.

The results of implementation of study programme regarding different specialties have been compared by means of benchmarking process. All single-subject curricula provide links to electronic course books, teaching aids and materials.

Teaching materials developed by the University teaching staff can be found in information media of the Baltic Federal University at the distance learning system website. Teaching materials, electronic course books and reference books are available in the library. Access to the resources is performed through the hyperlinks on the Library website.

Although the quality-related information system aimed at collecting, analyzing and using relevant information on student progression and success rates; employability of graduates; the institution’s own key performance indicators seems to exist at the Faculty, the Review Panel was not provided with any evidence concerning the availability of such system.

The websites of faculties and departments provide little information, the information is rarely updated. The websites do not contain basic regulatory documentation of the study programme – subject-specific programmes, working plans, etc. There are no timetables, webpages “news”, “announcements”, “methodological materials”, etc.

There is no information on the teaching staff members neither on the official website of the University nor at the Department. The University website should provide information on teaching staff members’ education, experience, courses they deliver as well as working programmes of these courses, information on their publications and participation in conferences, grants, and contact information.

Training and methodological materials should be posted in the online system lms-2.kantiana.ru/. The system is being implemented, so it is not widely used.

The library is closed at the weekend and in the evening during the week.

Compliance with the standard: partial compliance

Recommendations:

1) provide greater access to the information on the main indicators of the University performance;
2) develop the online resources available at the University (library, lms), promote them and encourage their implementation in the daily activities.

3.7 Standard 7. Public information

Informing the public about the study programmes is carried out according to the Physics and Engineering Department long-term strategy of establishing closer connections with industrial associations which is harmonized with the University's general strategy.

The information on study programme published in mass media and on the University website complies with conditions and resources offered by the educational institution for the programme implementation.

The Department of Physics and Engineering hosts meetings for the prospective students and arranges demonstrations of the study and research laboratory equipment. The Department staff members answer the applicants' questions concerning admission, education process and employment. In the course of the academic year 2011-2012 there had been more than 15 meetings held. The "School for Gifted Children" with focus on Physics, Mathematics and Technical areas intended for the pupils of the 10th grades has been held every June since 2011. During two weeks' period in June school children get acquainted with the equipment, they have laboratory practices, study theory and practice in order to get more knowledge of the latest achievements in science.

But the Panel considers it rather difficult to find information on the reviewed study programme, including its content, intended learning outcomes, qualifications awarded, level of teaching, methods of teaching and assessment, learning opportunities for students on the official website of the University/

The Faculty does not monitor the employability of the graduates at the appropriate level. It is necessary to develop a policy aimed at interaction with graduates. Currently the information on graduate employment is not available. The University is being establishing an association of alumni; the Faculty can also take an active part in this initiative.

Compliance with the standard: partial compliance

Recommendations:

1) develop a structure of the website that would facilitate navigation and search for information;
2) develop a system of interaction with graduates;
3) develop standard web pages of teaching staff members, departments, faculties;
4) provide teaching staff members, departments and faculties with the opportunity to update their web pages, which must contain up-to-date information;
5) make student graduation papers publicly available;
6) keep the English version of the website up-to-date.

4 RECOMMENDATIONS FOR IMPROVEMENT

1) Goals and strategies for development of the study programmes must be clearly outlined in documents, campaigns for promotion of the Federal University corporate culture must be carried out, all stakeholders – the University Administration, the Faculty, teaching staff, undergraduate and postgraduate students – should proactively participate in elaboration of the goals and strategy for development of the study programme.

2) Improve study programmes in "Information communications technologies and communication systems". It is important that the teaching staff and students understand the role of every element of the curriculum in learning outcomes, in acquiring key competencies. Using the possibilities of elaboration of its own Standards, the University should

- increase the number of elective course, assure free choice of the electives by students;
- introduce student research activities in the curriculum (in form of scientific and research seminars, interdisciplinary course papers / projects, etc.) as a mandatory element of the process of education.

3) Develop academic incentives for faculty participation in research and methodological activities; increase their involvement in publishing. The research projects done by the Department's teaching staff, Master's degree and postgraduate students are focused on regional issues; papers are seldom published in scientific journals approved by the Higher Attestation Committee, are not published in international peer-reviewed journals. Scientific isolation is caused by heavy workload of teaching staff members. They also have problems with communication due to poor knowledge of foreign languages. The Department does not have any agreements or grants related to fulfillment of research projects.

- take part in grant competitions, do projects ordered by enterprises in the domain;
- develop academic incentives for faculty and postgraduate students;
- reduce the faculty workload;
- provide greater involvement of students in projects carried out in the framework of agreements and grants.

4) Develop academic mobility of teaching staff, undergraduate and postgraduate students as well as international relations of the Faculty.

- invite leading foreign educators to give lectures and conduct master classes;
- encourage participation of teaching staff members, undergraduate and postgraduate students in international conferences;
- provide assistance in preparing publications for international editions;
- provide students and teaching staff members with greater opportunities to study English;
- develop exchange programmes, internships for teaching staff members, undergraduate and postgraduate students in leading HEIs beyond Russia;
- introduce disciplines delivered in English into the curriculum.

5) Encourage the use of information resources in the process of education. Provide training for the faculty and the students focused on the use of electronic resources of the library and the online system that manages training.

   Provide opportunities to use the information resources:

- establish at the Faculty a computer classroom equipped with modern hardware and software;
- provide high-speed access to network resources.

6) Improve the University's website. Design a user-friendly interface, standard webpages of the faculties, departments, teaching staff members and provide them with the opportunity to update them. The following documents should be published on the website of the Faculty / Department:

- key regulatory documentation relevant to the study programme (Federal State Educational Standards, the Basic Study Programme, curricula, working programmes, subject-specific programmes, etc);
- teaching staff members' personal webpages providing information on their education, academic degrees and titles, major publications and participation in conferences, etc;
- current information on the study process management (timetables, methodological materials, etc);
- graduation papers of Bachelor's and Master's degree students;
- information for and about graduates.

Keep the English version of the University's website up-to-date.

7) Carry out activities aimed at establishment of the association of alumni of the University.

8) Carry out a regular (twice a year) anonymous online survey of students aimed at evaluation of the quality of the process of education and teaching in all the disciplines, providing students with the opportunity to comment on the evaluations. Conduct regular public opinion polls of students and faculty.

5 CONCLUSION

In the light of the documentary and oral evidence considered by it, the Panel considers that, in the performance of their functions, the study programmes in "Information communications technologies and communication systems" are partially compliant with the NCPA Standards and Criteria for public accreditation. The standards where substantial compliance has been achieved are:

Standard 2. Approval, monitoring and periodic review of study programmes
Standard 5. Learning resources and student support
The standards where partial compliance has been achieved are:
Standard 1. Policy (mission, vision) and procedures for quality assurance ;
Standard 3. Assessment of student learning outcomes (competencies);
Standard 4. Quality assurance of teaching staff;
Standard 6. Information system providing effective implementation of the study programme
Standard 7. Public information.

Table 1. The scale of assessment parameters of the study programme

	NCPA Standards	Assessment of the study programme			
		Full compliance	Substantial compliance	Partial compliance (needs improvement)	Noncompliance
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			*	

Revealed weaknesses or inconsistencies must be corrected to ensure the quality of the study programme. Adequate measures should be taken in order to attain full compliance with the aforecited standards.

The Review Panel therefore recommends to the NCPA Accreditation Board that the study programmes in "Information communications technologies and communication systems" should be granted public accreditation for a period of six years on condition that the recommendations contained in the present report are implemented and an interim report describing follow-up measures and achieved progress is submitted to NCPA in 2 years.

On behalf of the Panel:

R. Akhmetsafina
Panel Secretary

ANNEX A

External Review of Study Programmes in
"ICT and communication systems"
delivered by the Federal State Autonomous Institution of Higher Professional Education
"Immanuel Kant Baltic Federal University (Immanuel Kant BFU)"

SCHEDULE OF THE SITE-VISIT

Time	Activity	Participants	Place
28 October, Sunday			
19.00	The first meeting of Review Panel members and coordinators of the review of study programmes of the Immanuel Kant Baltic Federal University		Conference room of the hotel ("Kaliningrad")
29 October, Monday			
9.45	Arrival at the Immanuel Kant BFU		
10.00 – 11.00	**Meeting of Review Panels with the University Administration and staff members responsible for accreditation**	Rector, vice-rectors Members of five Review Panels	Administration building 14, Al. Nevsky Str.
11.00 – 13.00	Visiting library, academic and sports facilities of the Immanuel Kant BFU	Directors of Institutes, Deans, Deputy Directors and Sub-Deans Review Panel	
13.00 – 14.00	Lunch		Dining-hall
14.00 – 15.00	**Meeting with BFU staff members responsible for accreditation of the study programmes under review**	Five Review Panels	Dean's office Room 404 14, Al. Nevsky Str
15.00 – 16.30	Work with documentation	Review Panel only	Room 308 14, Al. Nevsky Str.
16.30 - 17.30	**Meeting with professional practice representatives**	Professional practice representatives, Review Panel	Room 301 14, Al. Nevsky Str.
17.30 – 18.00	Internal Panel meeting	Review Panel only	Room 308 14, Al. Nevsky Str.
30 October, Tuesday			
9.45	Arrival at the Immanuel Kant BFU		14, Al. Nevsky Str. (academic building)
10.00 - 11.00	**Meeting with Heads of Departments**	Heads of Departments, Review Panel	Room 308 14, Al. Nevsky Str.
11.00 – 11.30	Internal Panel meeting	Review Panel only	Room 308 14, Al. Nevsky Str.
11.30 – 12.30	**Meeting with teaching staff**	Teaching staff, Review Panel	Room 301 14, Al. Nevsky Str.
12.30 – 13.00	Internal Panel meeting	Review Panel only	Room 308 14, Al. Nevsky Str.

Time	Activity	Participants	Place
13.00 – 14.00	Lunch		
14.00 – 15.30	Attending classes (upon request of the Review Panel)	Review Panel	
15.30 – 16.30	Work with documentation	Review Panel only	Room 308 14, Al. Nevsky Str.
16.30 – 17.30	**Meeting with alumni**	Alumni, Review Panel	Room 227 14, Al. Nevsky Str.
17.30 - 18.00	Internal Panel meeting	Review Panel only	Room 308 14, Al. Nevsky Str.
31 October, Wednesday			
9.45	Arrival at the Immanuel Kant BFU		14, Al. Nevsky Str. (academic building)
10.00 - 11.00	**Meeting with students**	Students, Review Panel	Room 227 14, Al. Nevsky Str.
11.00 - 11.30	Internal Panel meeting	Review Panel only	Room 308 14, Al. Nevsky Str.
11.30 - 12.00	**Meeting with post-graduate students**	Post-graduate students, Review Panel	Room 227 14, Al. Nevsky Str.
12.00 - 12.30	Internal Panel meeting	Review Panel only	Room 308 14, Al. Nevsky Str.
12.30 - 13.00	Work with documentation	Review Panel only	Room 308 14, Al. Nevsky Str.
13.00 - 14.00	Lunch		
14.00 - 16.00	Internal Panel meeting: discussion of preliminary results of the site visit, preparation of the oral report of the panel	Review Panel only	Room 308 14, Al. Nevsky Str.
16.00 – 17.00	**Closing meeting of the Review Panel with representatives of the Immanuel Kant BFU**	Review Panel, representatives of the University Administration, Heads of Departments, teaching staff, students	14, Al. Nevsky Str. , Administration building

ANNEX B

PARTICIPANTS OF THE MEETINGS

Staff members responsible for accreditation:

№	Name	Position
1	Alexei Ivanov	Dean of the Faculty of Physics and Technology
2	Andrei Shpilevoy	Major educational programme manager
3	Olga Suslova	Major educational programme manager

Professional practice representatives:

№	Name	Position
1	Serguey Likhobabin	Director of OJSC "VimpelCom" ("Beeline") in Kaliningrad"
2	Alexey Semenov	Director of Kaliningrad branch of OJSC "Rostelecom"
3	Grigory Romanov	Director of " Spectr Resheniy" Ltd.
4	Serguey Molchanov	Director of the Centre for Energy Efficiency
5	Andrey Perseechkin	Representative of Federal Security Service
6	Dmitry Pridannikov	Commercial director of "Baltsvyaz" Ltd.
7	Ivan Karpov	Academic secretary " "IZMIRAN"
8	Vitaliy Khaimin	Director General of "IntEx" Ltd.
9	Yury Polezhaev	Deputy Director of Kaliningrad Regional Radio-Television Broadcasting Center
10	Oleg Kivchun	Director General "Intelenergo39" Ltd.

Heads of Departments:

№	Name	Department
1	Veniamin Zakharov	Head of Department of Radiophysics and Information Security
2	Artyom Yurov	Head of Department of Theoretical Physics
3	Andrey Shpilevoy	Head of Department of Telecommunications

Teaching staff:

№	Name	Position
1	Valery Burmistrov	Senior lecturer
2	Elena Volkhonskaya	Professor
3	Tatyana Karpinskaya	Associate Professor
4	Evgueny Korotey	Senior lecturer
5	Viktor Ponimatkin	Associate Professor
6	Mikhail Savchenko	Associate Professor
7	Andrey Sokolov	Associate Professor
8	Olga Starovoitova	Senior lecturer
9	Anastasia Lebedkina	Assistant
10	Valeri Pakhotin	Professor

Alumni:

№	Name	Position
1	Maksim Afanasiev	Head of Department of "Rostelecom", 2010 (Master's Degree programme)
2	Vyacheslav Bakhtiyarov	Engineer, 2011 (Master's Degree programme)
3	Dmitry Budrikas	Engineer of the Centre for Energy Efficiency, 2010 (Master's Degree programme)
4	Dmitry Gavrilov	Communication Systems Engineers, 2008 (Bahelor's Degree programme)
5	Alexey Gursky	Communication Systems Engineers, 2011 (Bahelor's Degree programme)
6	Evgueny Degtyarev	Communication Systems Engineers, 2007 (Bahelor's Degree programme)
7	Natalia Zarnitsyna	Administrator, 2012 (Bahelor's Degree programme)
8	Evgueny Leshchenko	Engineer, 2011 (Bahelor's Degree programme)
9	Gleb Rudnev	Researcher, 2008 (Bahelor's Degree programme)
10	Анастасия Юрьевна Солдатенко	Head of Department of "Rostelecom", 2010 (Bahelor's Degree programme)
11	Новиков Evgueny Валерьевич	коммерческий директор, 2010 (Bahelor's Degree programme)

Students:

№	Name	Year
1	Kristina Sasorova	2 year
2	Yegor Medvedev	2 year
3	Roman Solovey	2 year
4	Evgueny Vasiliev	3 year
5	Anna Kokina	3 year
6	Artyom Kutukov	3 year
7	Irina Machay	4 year
8	Vladimir Pismenny	4 year
9	Artyom Zakharov	4 year
10	Serguey Barminov	4 year
11	Dmitry Kostenko	3 year
12	Ivan Volosunov	1st year (Master's Degree programme)
13	Veronika Rekut'	2 year (Master's Degree programme)
14	Alexander Lopukhov	2 year (Master's Degree programme)
15	Danil Borchevkin	1st year (Master's Degree programme)
16	Diana Rodina	1st year (Master's Degree programme)

Post-graduate students:

№	Name	Year
1	Anna Petrikeeva	1st year (postgraduate programme)
2	Stepan Pereverzev	2nd year (postgraduate programme)
3	Vyacheslav Uts	2nd year (postgraduate programme)
4	Roman Chirikov	1st year (postgraduate programme)
5	Vitaly Strokov	1st year (postgraduate programme)
6	Daria Kotova	3rd year (postgraduate programme)
7	Alexey Kochmarsky	postgraduate
8	Mikhail Zaitsev	3rd year (postgraduate programme)
9	Alexander Mazeev	3rd year (postgraduate programme)
10	Alexey Kovtun	1st year (postgraduate programme)