

АККОРК

Агентство
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Approved by

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REPORT

on the results of an independent evaluation of the main professional
educational programme of higher education

38.04.05 Business Informatics

State Budgetary Educational Institution of the Higher Education

“SAINT-PETERSBURG STATE UNIVERSITY”

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Moscow – 2017

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REPORT ON THE RESULTS OF AN INDEPENDENT EVALUATION OF THE MAIN EDUCATIONAL PROGRAMME

The master's programme "Information Business Analytics" is implemented within the 38.04.05 "Business Informatics" field of study by the Saint-Petersburg State University and leads to the award of the master qualification. The programme is run by the Head of Department of Information Business Analytics Khalin, V.G., Doctor of Economic Sciences, Academic, Professor of the Department of Information Systems in Economics of St. Petersburg State University.

An independent external assessment of the educational programme has been conducted by AKKORK reviewers on the 17 - 18th January, 2017.

1. CURRENT STATUS AND TRENDS OF DEVELOPMENT OF THE REGIONAL MARKET OF EDUCATIONAL SERVICES IN THIS FIELD OF STUDY

Analysis of the role and place of the programme

According to the HeadHunter company (<http://hh.ru/article/15097>) and SuperJob hr-agency (<http://www.superjob.ru/research/articles/111683/rynok-truda-moskvy-noyabr-2015/>), now there is a great need for graduates of the "Business Informatics" educational programme in St. Petersburg.

As of 11.11.16, 172 vacancies published in the field of business analytics on HeadHunter, 8 vacancies - on SuperJob, 4 vacancies - on spb.rqabota.ru.

Graduates of this programme are mainly focused on the labour market in St. Petersburg, so the need for neighboring regions in graduates of this field has not been analysed.

Two more universities (except SPSU) provide educational services in the field of study 38.04.05 "Business Informatics" in St. Petersburg, including:

- St. Petersburg National Research University of Information Technologies, Mechanics and Optics (ITMO), the proposed master's programs: IT consulting, Information systems in enterprise management;

- St. Petersburg State University of Telecommunications named after Academic Bonch-Bruevich, the proposed master's programme: Analysis, modelling and optimisation of business processes in management systems.

Since the Master's programme "Information Business Analytics" in St. Petersburg is implemented only by St. Petersburg State University, all applicants interested in its development are enrolled in St. Petersburg State University. In 2016, 43% of the total number of applicants applying for admission to the "Information Business Analytics" programme were graduates of St. Petersburg State University, 19% - graduates of other universities in St. Petersburg, 33% - graduates of Russian universities, except St. Petersburg, 4% - graduates of foreign universities, which roughly corresponds to the annual statistics of applications submitted.

Analysis of informational indicators provided by the university (conclusions)

- *The Percentage of students combining an education with work on major – 95%.*

Monitoring of the 2015-2016 graduates employment of the programme showed the following:

95% - found a job in their specialty during education;

5% - found a job in the specialty within 3 months after graduation.

• *The Percentage of alumni contingent employed within one year after the end of the main education in the field of study (specialty) obtained as a result of training on the main educational programme – 5%.*

- *The Percentage of alumni contingent, employed at the request of enterprises - 60%*

- *The Percentage of the number of students enrolled on order of employers, for example, on the basis of tripartite (target) Agreement - 0%.*

- *The Percentage of alumni contingent working on the profile of training in the region - 95%.*

- *The Percentage of alumni contingent working on the profile of training outside the region - 5%.*

Master student of 2016 issue Antonov Kirill works in Moscow.

- *the number of complaints to the alumni - 0.*

- *Number of positive feedback of organisation on the work of alumni - 8.*

- *The Percentage of the contingent of students within the main educational programme enrolled for studying on master programmes who have completed training in the bachelor programme.*

- Issue 2015: 16 people, representing 70% of the bachelor issue

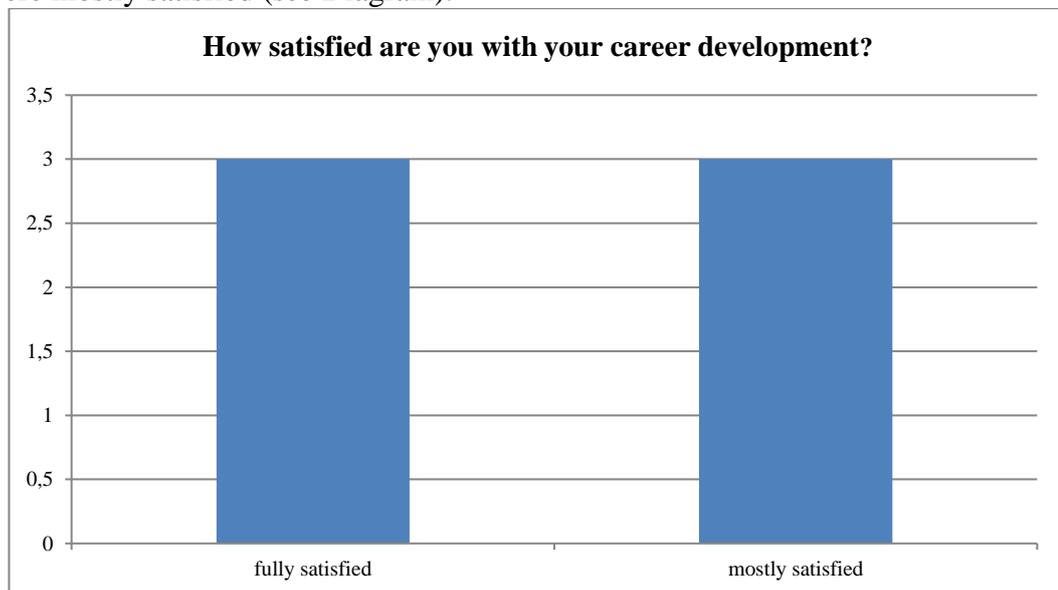
- Issue 2016: 11 people, representing 50% of the bachelor issue

- Overall: 60% of the 2015-2016 bachelor issue.

Additional information:

As a result of self-assessment conducted by the educational institution, here are presented the data on the distribution of alumni: 100% of the graduates of the master's programme "Information Business Analytics" work on the specialty. Data provided by the institution have been confirmed during the studying of the relevant documents and a survey of graduates conducted during accreditation events.

During the survey of graduates, 50% of the respondents expressed their full satisfaction answering the question "How satisfied are you with your career development?", the remaining 50% were mostly satisfied (see Diagram).



2. SUMMARY OF THE PROGRAMME

Strengths of the programme

The key role in the design, implementation and definition of the development strategy of the master's programme "Informational Business Analytics" of the "Business Informatics" field of study is played by the Councils of Educational Programmes (boards of trustees), employers play an active role in the work of the Councils.

The "Information Business Analytics" master's programme is distinguished by the high professionalism of the faculty. This programme is implemented by 20 professors, including 7 academics/ doctors of sciences (35%), 13 associate professors / candidates of sciences (65%).

The knowledge of English at a high professional level (level B2) is important for career growth of graduates of the master's programme is. The master students are given the opportunity to study more than one foreign language within the framework of the educational programme 38.04.05 "Business Informatics".

The Academic Community of the Faculty of Economics of St. Petersburg State University (including the students of the master's programme "Information Business Analytics") actively participates in research works implemented using the capabilities of research laboratories, scientific and resource centres of the university.

The flexible structure of the programme provides students with the opportunity of choice.

The competencies of the graduates of the "Information Business Analytics" master's programme meet the requirements of the regional labour market, as evidenced by the demand for graduates of this field of study and the positive feedback given by the employers to the reviewer.

It should also be noted the high level of material and technical support for the educational process (auditor fund, library, electronic resources in both Russian and English languages, equipping audiences, computer classes and software).

Weaknesses of the programme

The analysis of the master's programme "Information Business Analytics" showed that it has a significant intersection with the Bachelor's programme in "Business Informatics". The master's programme includes more than 30% of theoretical disciplines of an economic profile. Some main professional disciplines have a small amount of hours ("International standards of business intelligence and modelling of business processes" has only 3 credits, "Enterprise architecture" has 3 credits).

Main recommendations of the reviewer for the programme

In order to improve the quality of the Master's programme "Information Business Analytics", it is necessary to update its content, expand the range of professional disciplines by reducing the economic disciplines duplicating bachelor's disciplines (Macroeconomics, Microeconomics, Financial Management, etc.). In addition, it is necessary to increase the lecture hours of main professional disciplines.

To expand the composition of the studied modern information technology in professional disciplines, in particular, this should be reflected in the topics of master's theses.

To consider the possibility of further benchmarking of SPSU programmes with programmes offered by other institutions, for example:

- Survey of graduates. The annual survey of all graduates is needed to determine the number of employed, positions, wages, etc.
- Publication of the results of the students' progress (for example, the data on passing the exam, the level of achievement (in comparison with the next year or

with programmes of higher education level), the final classification of grades (with honours / passed), and others.

To consider the possibility of implementing programmes to improve the skills with the issuance of a document on education in terms of teaching and pedagogics for professors.

To consider the possibility of developing strategies for education, teaching, and evaluating programmes within the profile institute. Particular attention should be paid to both qualitative and quantitative assessment and timely feedback on the evaluation.

Further development of the programme content on the following topics:

- Database
- System integration
- Servers (operating system modules)
- Data transfer (between systems)

It is recommended to identify clear learning outcomes for the programme and module, so that they adequately reflect the context, level, scope and content of the programme / module and were written using active verbs (Section 3.3 of the ECTS User Manual can help in this regard). 10-12 learning outcomes for the programme and 6-8 learning outcomes for the module is desirable.

To present and publish clear policies regarding access, transfer and education. This may include a policy for the recognition of prior learning (empirical and accredited).

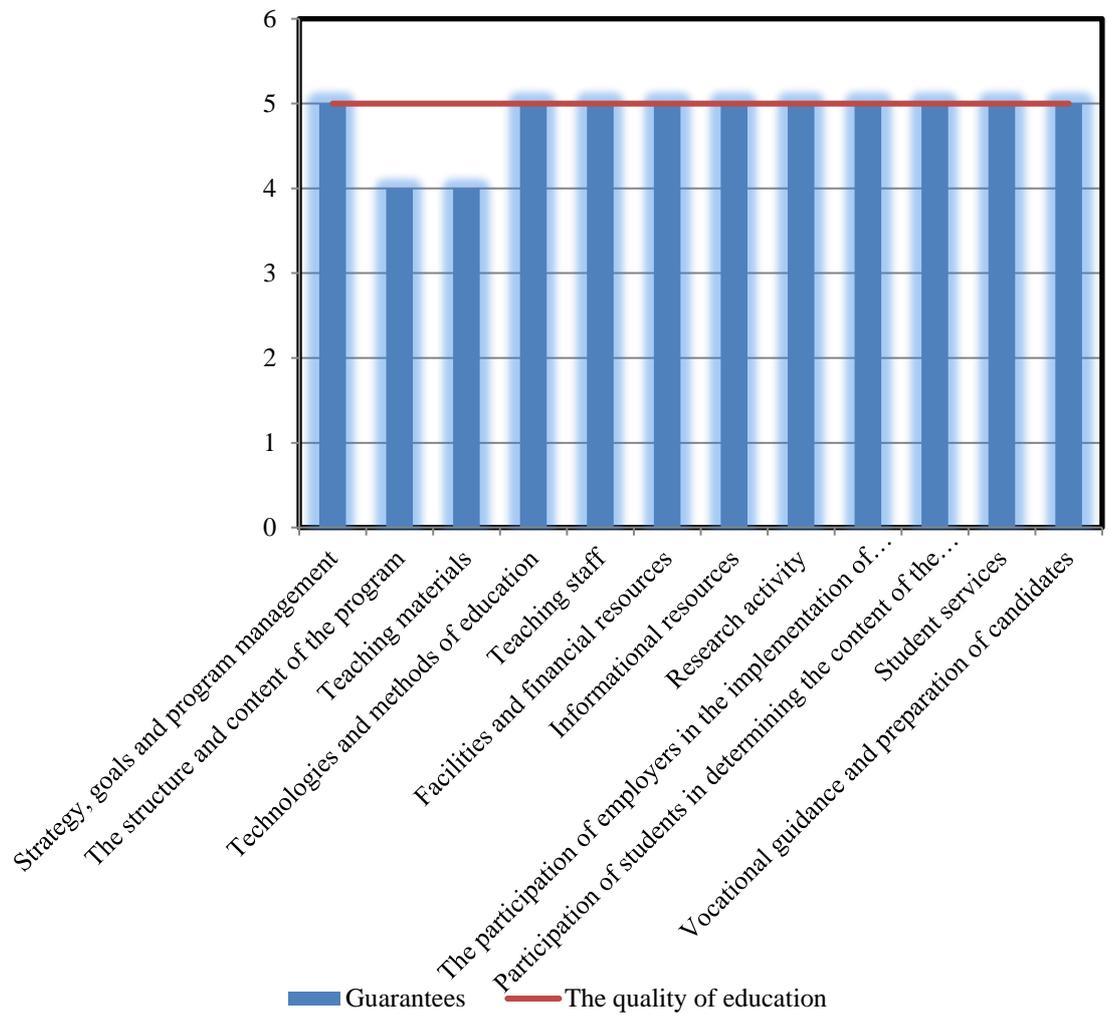
It is recommended that the level of the Qualifications Frameworks in European Higher Education Area (QF - EHEA) be specified in the main educational programme.

It is recommended that further opportunities be developed for deeper interaction with employers / industry regarding potential educational programmes for employees, including part-time and flexible programmes.

Profile for learning outcomes assessment and education quality assurance

No	Criterion	Mark	
<i>I</i>	Quality of learning outcomes		
	1.	Demand for graduates of the programme on labour market	5
	2.	Satisfaction of all customers	5
	3.	Results of direct assessment	5
<i>II</i>	<i>Quality assurance:</i>		
	1.	Strategy, goals and programme management	5
	2.	Structure and content of the programme	4
	3.	Teaching materials	4
	4.	Technologies and techniques of educational activities	5
	5.	Teaching staff	5
	6.	Physical facilities and financial resources	5
	7.	Information resources of the programme	5
	8.	Research activity	5
	9.	Participation of employers in the implementation of the programme	5
	10.	Students' participation in the programme management	5
	11.	Students' services	5
12.	Career guidance and preparation of applicants	5	

Profile of learning outcomes assessment and education quality assurance



3. QUALITY OF LEARNING OUTCOMES

Direct assessment of competence by the reviewer

The direct assessment of Master students' competencies was conducted during the on-site visit. First- and second-year students took part in the direct evaluation, in the number of 4 people, which is 17% of the final course.

The measurement and control materials developed by the reviewers were used during the procedure of direct assessment of students.

The reviewer has chosen following competencies for the analysis of the competencies formation:

Competency code	Name and (or) description of competence
GC-2	Ability to apply methods of quantitative analysis and modelling
PC-2	Possessing of methods for analysing the innovation activity of an enterprise
PC -3	Ability to apply methods of system analysis and modelling for the analysis of enterprise architecture
PC -4	Readiness to develop a strategy for the enterprise architecture development

When implementing the procedure for direct assessment of competencies, the reviewer used the following test materials:

Task: design model "as is", using BPMN notation for a given business process "Manufacturing product A". Based on the results of the analysis of the business process, it is necessary to reengineer it and develop a model of "how it will be".

Based on the results of a direct assessment of competencies, the reviewer found that 100% of students coped with the assignment.

Level	Sufficient level (have managed with 80% of the proposed tasks)	Acceptable level (the percentage of solved tasks from 50 to 79%)	Low level (percentage of solved tasks is less than or equal to 49%)
Students ratio			
50%	+		
50%		+	

In assessing the quality of education, reviewer has acquainted with 3 master's theses, representing 27% of the graduate works of the 2016 in this field of study. He has concluded that these master's theses correspond to all the requirements stated below

GRADUATE QUALIFICATION WORKS

No	Objects of assessment	Comments of reviewers
1.	Subject of graduate qualification work corresponds to the field of study and modern level of science, technology and (or) software technology.	100%
2.	Tasks and contents of graduate qualification work are aimed at confirmation of graduate competences.	100%
3.	Utilization rate of materials collected or obtained during the passage of pre-degree practice and implementation of course papers in the graduate qualification work.	100%
4.	Subject of graduate qualification work is defined by	70%

	demands of industrial organisations and tasks of experimental activities solved by faculty of the institution.	
5.	The results of graduate qualification work find practical application in the workplace.	60%
6.	Utilization rate of the results of research activities of the department, faculty, and third-party research and production and / or research organisations when performing independent research parts in the graduate qualification work.	10%

Conclusions and recommendations of the reviewer

Conclusions:

The subjects of the presented graduate qualification works correspond to the "Business Informatics" field of study and the current level of development of science and technologies in the field of the main educational programme. Based on the results of direct assessment of competencies, interviews with employers and analysis of the graduate qualification work, the reviewer assessed the "Quality of Education" criterion as excellent.

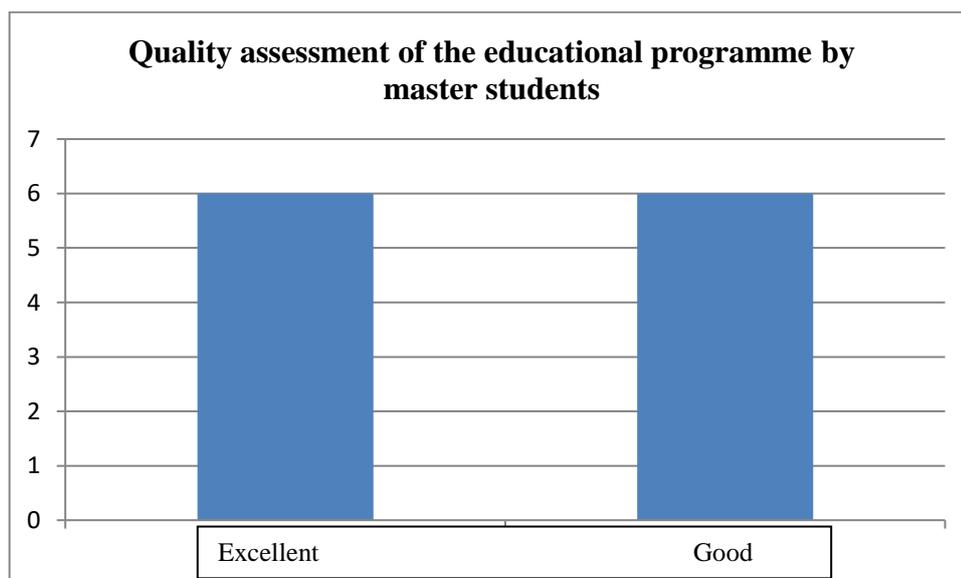
Recommendations:

To ensure the practice-oriented nature of graduate qualification works and the use of modern technologies and solutions of the IT industry.

Since the survey of graduates showed that half of them noted the lack of communication skills in the initial period of work, Heads of the programme should pay attention to the formation of communication competencies.

Addition information:

As a result of questioning of students, the data were represented by educational institution. These data have been verified by the reviewer during the on-site visit and were confirmed by the reviewer as a result of on-site visit.



As a result of the survey with 12 master students, 50% of them assessed the quality of education as excellent, other 50% assessed it as good, which allows the reviewer to draw conclusions about students' satisfaction with the quality of education.

4. EDUCATION QUALITY ASSURANCE

1. Strategy, goals and programme management

Evaluation of criterion: excellent

Strengths of the programme:

The strategy for the development of the Master's programme "Information Business Analytics" is aimed at improving the quality of education, maintaining the competitiveness of the programme both in the educational and scientific space of the Russian Federation and in the professional labour market, is aimed at ensuring the quality of education in one of the priority areas of the SPSU Development - in Programme Systems and technologies - and is implemented in accordance with the educational standard of the St. Petersburg State University.

The Council of Education Programme (the Board of Trustees), which includes employers and representatives of business communities, actively participates in the definition and implementation of the main educational programme development strategy. There is a practice of holding business seminars of the Department of Information Systems in Economics with the involvement of the main employers, which analyse the strategic directions for the development of the master's programme "Information Business Analytics" and adjust the content of methods and technologies for master students training in accordance with the requirements of the labour market.

Quality control of education is performed using annual monitoring.

Recommendations:

To improve the quality of the main educational programme Business Informatics, it is necessary to open basic departments at the faculty, representing well-known foreign and Russian firms working in the field of development and introduction of information technologies. This will ensure the practical orientation of training, dynamically respond to all innovations in the field of IT, annually update the educational programme in terms of academic disciplines and their educational and thematic plans.

To consider the possibility of further benchmarking of SPSU programmes with programmes offered by other institutions, for example:

- Survey of graduates. The annual survey of all graduates is needed to determine the number of employed, positions, wages, etc.
- Publication of the results of the students' progress (for example, the data on passing the exam, the level of achievement (in comparison with the next year or with programmes of higher education level), the final classification of grades (with honours / passed), and others
- To consider developing strategies for teaching, teaching and evaluating programmes within the profile institute. Particular attention should be paid to both qualitative and quantitative assessment and timely feedback on the evaluation.

To present and publish clear policies regarding access, transfer and education. This may include a policy for the recognition of prior learning (empirical and accredited).

It is recommended that the level of the Qualifications Frameworks in European Higher Education Area (QF - EHEA) be specified in the main educational programme.

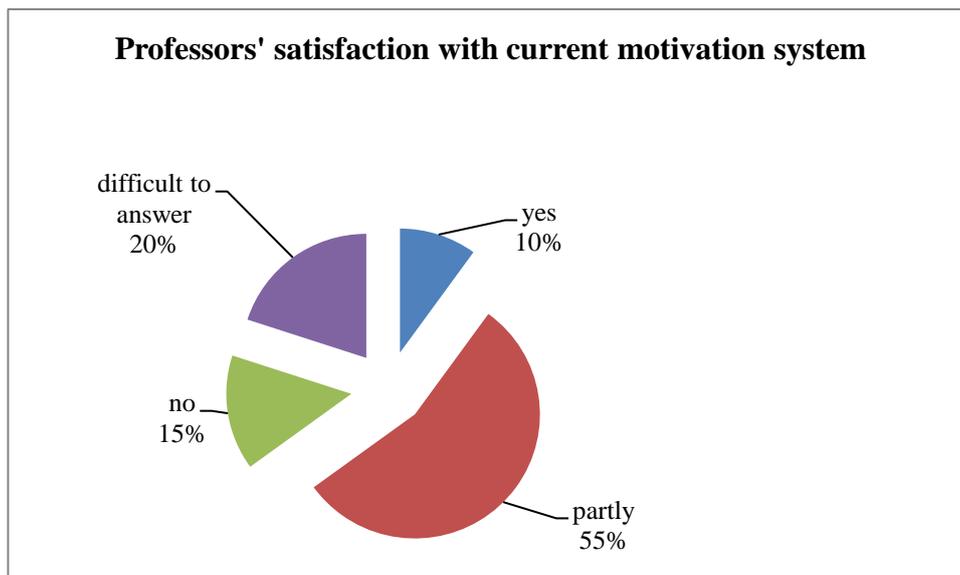
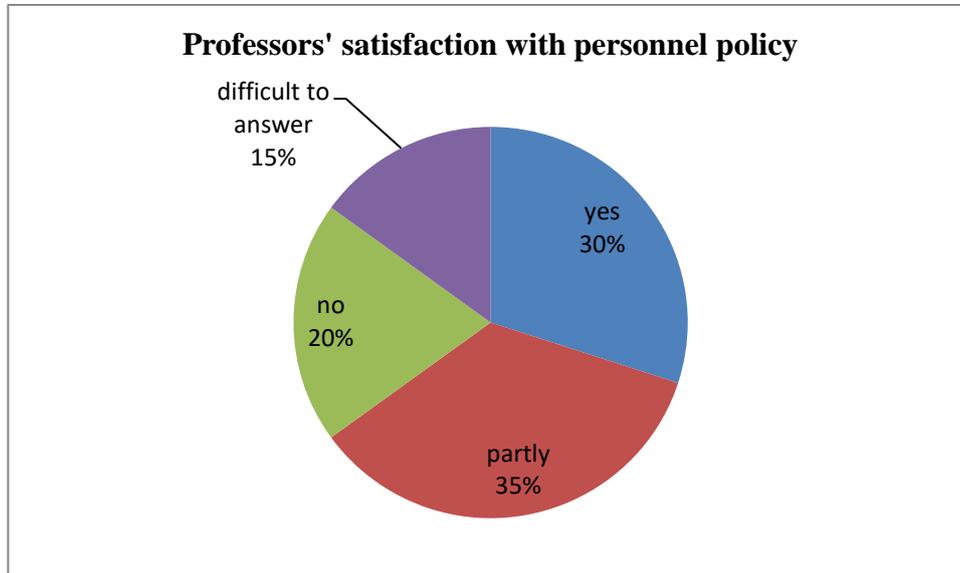
Additional information

During the on-site visit, interviews of employers were conducted, by results of which it is possible to conclude that at the moment they consider the objectives of the educational programme are relevant to demands of the labour market.

During the on-site visit, the reviewer interviewed students, professors, employees and received data that allow the reviewer to conclude that the majority of students, professors,

employees aware of the development strategy of the educational programme, its goals and objectives.

During the self-assessment, the institution has presented data on the survey about professors' satisfaction with personnel policy, the existing system of motivation and loyalty of employees, the survey data are reflected in the diagrams below.



During the on-site visit, interviews were conducted among the professors involved in the programme implementation.

Following the results of the interview, the reviewer concludes that the professors are mostly fully or partially satisfied with the university's personnel policy (65%) and the current motivation system (65%).

At the same time, the practice of concluding agreements with professors for only a year at the university causes dissatisfaction with the teaching staff, and as a consequence, the need for annual participation of professors in the competitive selection for positions. This arrangement introduces uncertainty in the prospects for continuing the work of each of the professors at the university and is an obstacle to planning and implementing long-term scientific, educational, methodological work and, as a consequence, an obstacle to the implementation of the strategic goals of the main educational programme.

2. Structure and content of the programme

Evaluation of criterion: good

Strengths of the programme:

The competence model of graduate of the master's programme "Information Business Analytics" correlates with the following professional standards:

- Professional Standard System Analyst: Order of the Ministry of Labour and Social Protection of the Russian Federation of October 28th, 2014 N 809n. - access mode: <http://rulaws.ru/acts/Prikaz-Mintruda-Rossii-ot-28.10.2014-N-809n/> (reference date: November 1st, 2016).
- Professional standard Specialist for automated control systems: the order of the Ministry of Labour and Social Protection of the Russian Federation of October 13th, 2014 N 713n-mode of access: <http://rulaws.ru/acts/Prikaz-Mintruda-Rossii-ot-13.10.2014-N-713n/> (reference date: November 1st, 2016).
- Professional standard Project manager in the field of information technology: the order of the Ministry of Labour and Social Protection of the Russian Federation of November 18th, 2014 N 893n. - access mode: <http://rulaws.ru/acts/Prikaz-Mintruda-Rossii-ot-18.11.2014-N-893n/>
- Professional standard IT Manager: Order of the Ministry of Labour and Social Protection of the Russian Federation of October 13th, 2014 N 716n. - access mode: <http://rulaws.ru/acts/Prikaz-Mintruda-Rossii-ot-13.10.2014-N-716n/>
- Professional standard Software development manager: the order of the Ministry of Labour and Social Protection of the Russian Federation of September 17th, 2014 N 645n. - access mode: <http://rulaws.ru/acts/Prikaz-Mintruda-Rossii-ot-17.09.2014-N-645n/>
- Professional standard Specialist for large data: project. - access mode: <http://www.ncsu.ru/index.php/2011-09-13-17-43-55/166--2016-.html>
- Professional standard Information Systems Specialist: the order of the Ministry of Labour and Social Protection of the Russian Federation of November 18th, 2014 N 896n. - access mode: <http://rulaws.ru/acts/Prikaz-Mintruda-Rossii-ot-18.11.2014-N-896n/>
- Professional standard Software Architect: the order of the Ministry of Labour and Social Protection of the Russian Federation of April 11th, 2014 N 228n - <http://rulaws.ru/acts/Prikaz-Mintruda-Rossii-ot-11.04.2014-N-228n/>

Recommendations:

The analysis of the curricula allowed the reviewer conclude that the Master's programme of Business Informatics partially repeats the Bachelor's programme.

Main educational programme includes a substantial proportion of economic disciplines, which form the main content of the first semester of the curriculum. According to the results of the survey of master students, these disciplines are not of interest to them. At the same time, the disciplines that students consider to be of great interest (Business Information Analysis, International Business Analysis Standards and Business Process Modelling, Enterprise Architecture, etc.) require, in their opinion, more in-depth study.

As a wish, graduates and employers also note that it is necessary to introduce in the master's programme of Business Informatics practice-oriented disciplines aimed at mastering in-depth knowledge in the field of databases, enterprise architecture, programming, integration of corporate applications, and disciplines that provide graduates with the necessary practical skills in working with modern information systems (SAP, Oracle, Microsoft, IBM, 1C, etc.).

It is recommended to identify clear learning outcomes for the programme and module, so that they adequately reflect the context, level, scope and content of the programme / module and were written using active verbs (Section 3.3 of the ECTS User Manual can help in this regard).

10-12 learning outcomes for the programme and 6-8 learning outcomes for the module is desirable.

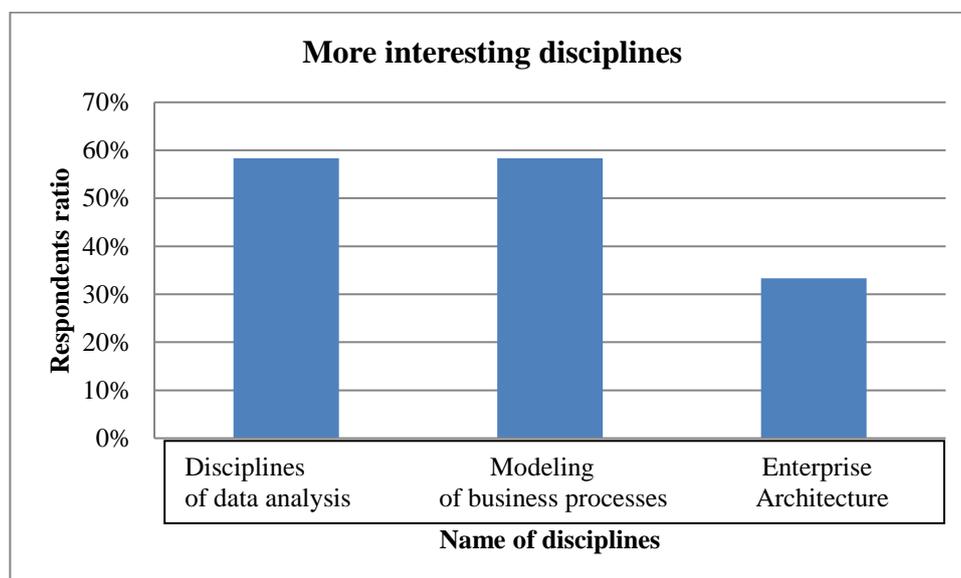
Further development of the programme content on the following topics:

- Database
- System integration
- Servers (operating system modules)
- Data transfer (between systems)

Additional information

During the full-time visit, the reviewers met with the students of the programme evaluated. One of the issues discussed is disciplines quality. According to the results of the meetings, the reviewer concludes that master students of "Business Informatics" prefer professional disciplines related to the modelling and analysis of business processes, the development of enterprise architecture and are interested in their in-depth study.

It is confirmed by the results of a survey of students conducted in the context of self-assessment (see the diagram).



Respondents indicated economic disciplines (System analysis- (33% of respondents), Macroeconomics, Management) as the least interesting ones.

The next of the issues discussed is the relevance of the structure and content of the programme to the expectations of direct consumers of programme (master students). Data collected on the basis of the survey results are presented in the diagram. The data collected from the survey showed that 11 out of 12 respondents (92%) confirmed the conformity of the structure and content of the programme to their expectations, and only 1 respondent (8%) said that compliance is incomplete.

3. Teaching materials

Evaluation of criterion: good

Strengths of the programme:

SPSU independently develops educational standards, in accordance with which educational programmes for the preparation of master's and bachelor's degree are then formed.

Recommendations:

It is necessary to regulate the frequency and methodology of updating teaching materials in accordance with changing conditions in the federal, regional and local labour markets and internal monitoring of the quality of education, and it is necessary to establish the procedure for coordinating teaching materials in main professional disciplines with employers.

It is necessary to expand the range and increase volume of classroom hours of professional disciplines read, focused on the development of applied professional competences.

It is necessary to update the content and recommended literature of working programmes of professional disciplines.

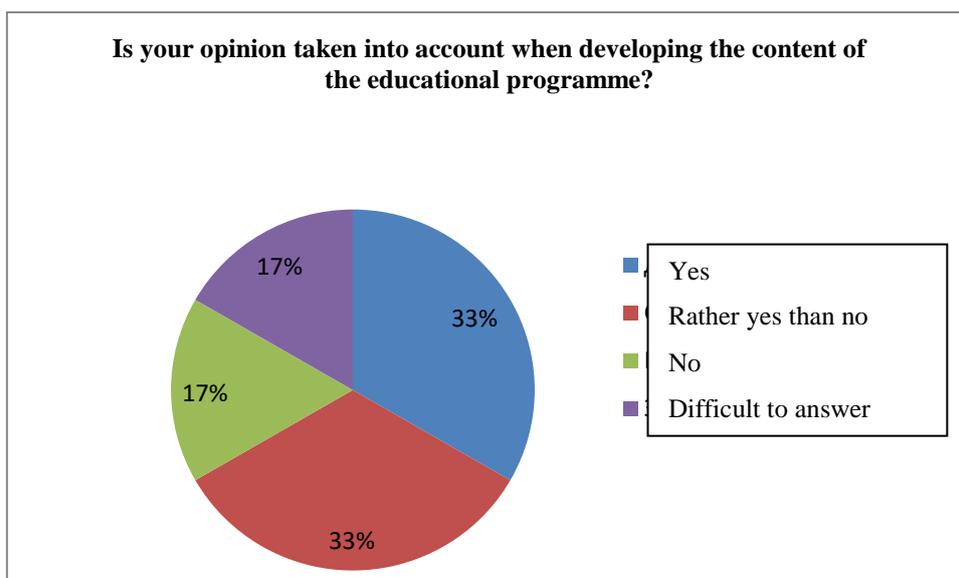
Additional information:

When conducting the on-site visit, the reviewer got acquainted with the educational materials developed in the educational institution.

The reviewer concludes that the main recommended literature is partially outdated.

During the on-site visit, the reviewer analysed test materials used by the educational institution for ongoing monitoring of academic performance. This allowed the reviewer to conclude that the main form of current knowledge control is both testing and traditional form.

According to the results of the questionnaire submitted by the educational institution, the results of which were confirmed during the on-site visit, the majority of students (66%) believe that their opinion is taken into account when developing the content of the educational programme.



4. Technologies and techniques of educational activities

Evaluation of criterion: excellent.

Strengths of the programme:

19% of the total number of disciplines are conducted by employers, which is 13.4%

Recommendations:

To use more actively interactive learning technologies, cases and practice-oriented tasks, modern IT solutions in the education process, especially for the professional disciplines mastering.

To introduce the BlackBoard e-learning system into the educational process more actively.

Additional information:

During the on-site visit, the reviewer visited the lesson, the analysis of which is presented below.

Full name of professor: Ivanova, Victoria Valeryevna, Lezina, Tatyana Andreyevna

Group / Specialty: Information Business Analytics, Master's programme, 1 year

1. Discipline /module: International standards of analytics and modelling of business processes

2. Type of training

- lecture
- seminar
- laboratory work
- practice
- integrated lesson
- other examination

3. Lesson Focus: examination

4. The purpose of the class: Ongoing control of progress

5. The aims of the class: Control of knowledge formed as a result of studying the theoretical course, skills acquired in the process of working over practical tasks and a mini-project during the term.

6. Facilities:

The exam was conducted in a computer class: computers with standard software, licensed programme Business Studio version 4.0, access to the Internet for the duration of the exam is disabled.

7. Specify:

No	The knowledge and skills which are planned to generate in class and competences, which affect the formation of the knowledge, and skills (must be announced by lecturer)	The forms, tools, methods and techniques used for the formation of competence in class
1.	Knowledge of the principles of business analysis in accordance with international standards of business analysis. Promotes the consolidation of competence: Possession of methods of analysis of innovative activity of an enterprise	Theoretical questions of the first part of the examination task. Open questions that require justification for certain decisions.
2.	Knowledge of the principles of the process approach to management in accordance with Russian and world standards. It contributes to the mastery of competencies: The ability to plan the management processes of an enterprise and organize their execution, Ability to apply methods of system analysis and modelling for enterprise architecture analysis	Theoretical questions of the examination task. Justification of the choice of tools in the implementation of a practical task (open question 1), justification of selected goals and indicators of the strategic map.
3.	Knowledge of the basic techniques for building a model of business processes, the skills of a reasoned choice of methods	The need for the student to justify the choice of the business process model notation (open question 1), the requirement to form models of

	for identifying business processes, the skills of highlighting business processes in accordance with the organization's strategy. It contributes to the mastery of competencies: Readiness to develop a strategy for the development of the enterprise architecture, the ability to plan the management processes of the enterprise and organize their implementing	top-level processes, and the decomposition of the selected process into the selected notation in the software environment (Business Studio). Thus, the understanding of both top-level process notations and the level of execution algorithms is monitored.
4.	Knowledge of existing approaches to the analysis and optimization of business processes of the organization, the skills of analysing business processes using the developed techniques, conducting a simulation of the business process. It contributes to the mastery of competencies: Possession of methods of analysis of innovative activity of an enterprise	The open question 3 raises problems related to the analysis of the process. For example, for the generated model, it is necessary to characterise the technology of the process simulation from the point of view of developing recommendations for improving the chosen process. It is required to set the task of carrying out simulations and justify the requirements that must be fulfilled for a qualitative imitation of the process.
5.	Ability to select an adequate tool for data analysis in spreadsheet environments, implement typical data analysis methods in spreadsheet environments. It promotes the consolidation of the created competence: The ability to prepare analytical materials for assessing activities and developing strategic decisions in the field of study, Possession of methods of analysis of innovative activity of an enterprise	In open question 2, a small practical analytical task is posed, for which it is required to select not only the programme environment, but also the analysis technique. It is also necessary to interpret the result obtained.
6.	The ability to create a system of business process indicators for further optimization, skills of analysing business processes using developed methods. It promotes the consolidation of the created competence Ability to apply analysis and modelling methods for enterprise architecture analysis	The open question 3 may include tasks related to the development and justification of an oriented graph of indicators for the formation of a business process control system. It is required to propose a "sketch" of the graph for the subject area defined in open question 1. Also, tickets may include questions related to the description and justification of the requirements for the indicators.

THE EVALUATION OF A LECTURER

No	Criteria of analysis	Index	Mark (0,1,2)
1.	Compliance with employment regulations	Timely start and end of lesson, balanced time of sections.	2
2.	Organisational process	Greeting. Informing about topics and target (connection between target and evolving competences).	2
3.	Motivating students for	Indication of urgency, of formed professional and	2

	the upcoming activities	/ or social and personal competencies.	
4.	Classroom climate	Presence of a positive emotional interaction between lecturer and students; mutual goodwill and audience participation.	2
5.	The quality of presentation	Structured material; clarity of designations of current tasks; consistency and availability of presentation; adaptation presentation to the specific of the audience; examples of relevant facts.	
6.	Compliance with the content of the course programme	Compare with study programmes of the disciplines (teaching materials).	2
7.	The use of visual aids	Textbook, workshop handouts, tables, figures, etc.	
8.	Oratory	Audibility, intelligibility, euphony, literacy, rate of speech; facial expressions, gestures, pantomime; emotional intensity performances.	2
9.	Sensitivity to the audience	The ability to react to changes in the perception of the audience.	2
10.	Correctness to students		2
11.	Methods of attention organisation and student behaviour regulation	Increasing the interest among the audience (the original examples, humour, rhetorical devices etc.); Involving the audience in a dialogue, in the process of performing tasks, etc. However, do not: open call to the attention of the audience; demonstration of disapproval; psychological pressure, blackmail.	
12.	Feedback during the lecture	Control of material learning	
13.	Summing up (organisation of reflection)	Organisation of reflection in which students are actively discussing the results	
14.	Image	Compliance with corporate identity, presentable, charisma	2
15.	Final evaluation		<i>excellent</i>
16.	Notes and reviewer recommendations		

As a result of analysis of desk review of self-assessment, curriculum and class schedules analysis, the reviewer determined that the Percentage of classes conducting in an interactive way for the whole programme is about 15%.

5. Teaching staff

Evaluation of criterion: excellent

Strengths of the programme:

This educational Bachelor's educational programme is implemented by 20 lecturers, including 7 academics / doctors of sciences (35%), 13 associate professors / PhDs (65%).

The entire teaching staff is working on effective contracts and their high professional qualification is confirmed with each passing competitive selection.

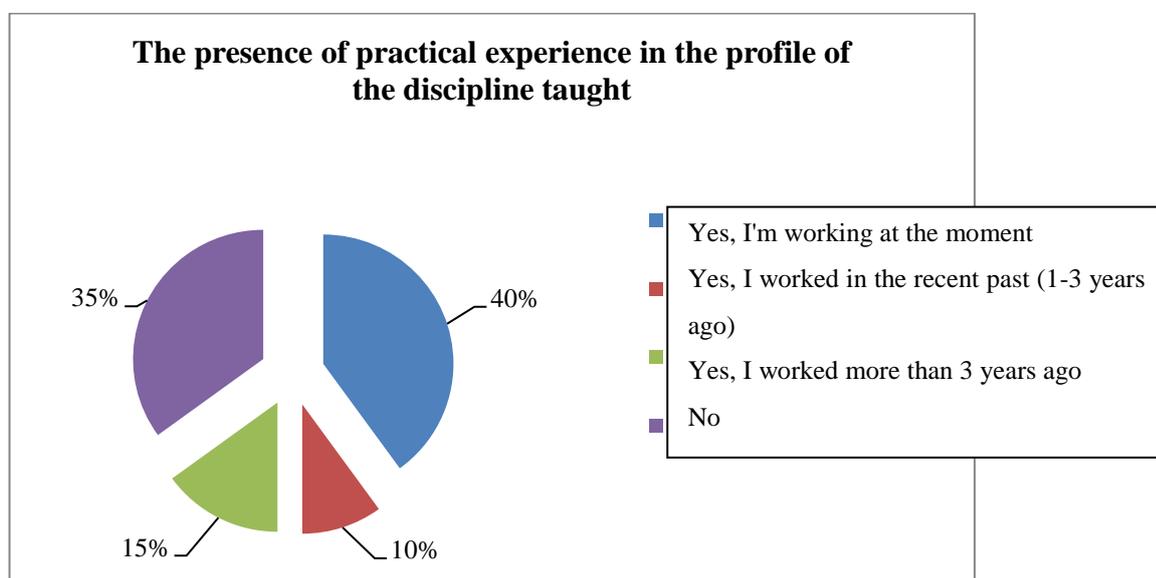
Recommendations:

To increase the duration of the terms of employment contracts for professors. To introduce more actively motivational technologies in the university practice for attracting talented youth to the teaching work.

To consider the possibility of implementing programmes for the development of skills with the issuance of a document on education in terms of teaching and pedagogy for professors.

Additional information:

According to the results of the survey, 65% of the 20 professors interviewed confirmed the existence of practical experience in the profile of the discipline taught.



Analysing the facts set out by the educational institution in the statement of self-examination, the reviewer concluded that the data are relevant and reliable.

Based on the results of the analysis, the reviewer concludes: the staff and financial policies of the university are documented and fully transparent for professors; working conditions are satisfied professors, so they are interested in continuing work in SPSU.

6. Material and technical and financial resources of the programme

Evaluation of criterion: excellent

Strengths of the programme:

In 2014, modern high-tech equipment used in SPSU to conduct basic and applied research, and its operations were merged into a single structure - the SPSU Science Park, available for research in all areas of training.

Financial support of federal state budgetary educational institution of higher education "Saint-Petersburg State University" (hereinafter - SPSU) is implemented within the budget provided in accordance with the laws on the federal budget, and funds from income-generating activities within its kinds provided by the Charter.

Recommendations:

To provide funds for the purchase of licensed software for studying modern IT solutions (e.g. ERP systems of global vendors) by "Business Informatics" students.

Additional information:

During the on-site visit, reviewers have conducted interviews with students and lecturers participating in the programme on satisfaction with the quality of classroom fund, funds and the reading room of the library, laboratories and its facilities of departments. 100% of students and professors have expressed complete satisfaction with the material base of the educational programme.

This allows the reviewer to make a conclusion about the high level of material and technical and financial support of the Business Informatics master programme.

7. Information resources of the programme

Evaluation of criterion: excellent

Strengths of the programme:

SPSU has created all necessary infrastructure for effective creation, storage and delivery of educational content to students:

Access to electronic informational resources from the SPSU subscription is implemented through website of the SPSU Scientific Library.

Access to the service Bloomberg Professional for professors and students allowing real-time monitoring and analysis of the movement of the financial market is possible in a specially created and equipped laboratory.

Access to modern scientific computing infrastructure is possible in 25 resource centres united in Science Park.

Faculty, staff and students can share information with each other and work with online - resources through the Blackboard system.

Recommendations:

Actively use the Blackboard system for informational support and master students' independent work.

8. Research activity

Evaluation of criterion: excellent

Strengths of the programme:

Currently, SPSU Science Park includes 27 resource centres (hereinafter, RC) (4 of which were established in 2015). Size of Science Park facilities is 30 000 sq.m. The number of instrument complexes is about 300, all the equipment for more than 6 thousand units. Volume of investments in equipment amounted to about \$ 180 million.

In 2015, SPSU amounted to 1,660,168.2 thousand rubles in the total volume of research, development and engineering works (hereinafter R & D), while counting on one academic worker the amount of funds totaled 374.23 thousand rubles per year.

Number of publications of SPSU workers in 2015 (as of April 1, 2016), indexed in the Web of Science, was 2215 units, in Scopus - 2918 units.

For the previous 2015 - 2016 academic year, the professors of the "Business Informatics" educational programme have implemented:

- Defence of Candidate theses-4;
- publications in Russian Science Citation Index - 222;
- scientific articles - 95;

- textbooks - 7;
- Reports and abstracts of scientific conferences - 113;
- publications in WoS - 9, SCOPUS - 4;
- applications for scientific projects competitions were supported - 3: SPSU - 1, Russian Foundation for Basic Research (RFBR) - 1, ERASMUS-1;
- applications were submitted for the competitions of scientific projects - 11:
2014 - 7: Russian Science Foundation (RSF) (2), Russian Foundation for Humanities (RFS) (2), RFBR (1), St. Petersburg State University (2);
2015 - 3: RFBR (1), RSF (1), EU ERASMUS + (1);
2016-1: RFBR (1).

Recommendations:

To develop more actively the students' science, attracting master students to participate in scientific conferences and research projects, writing scientific articles and abstracts.

Additional information:

The educational institution provided information on the results of monitoring the opinions of master students "Are you attracted to scientific research?" in the self-assessment documents. The survey results showed that 100% of the respondents answered this question positively.

9. Participation of employers in the implementation of the programme

Evaluation of criterion: excellent

Strengths of the programme:

In 2016, Business Informatics students took part in 30 master classes and meetings with potential employers. Including:

1. Career Day. November 19th, 2016.
2. The presentation of the information agency "CredInform". March 24, 2016
3. The presentation of the PAO "Gazprom Neft" company. October 19, 2016.
4. Day of PAO "NC" Rosneft " company .October 08th, 2016
5. Master-class "Complete analytics and automation in contextual advertising", leading by eLama.ru CEO Dovzhikov A.
6. Workshop of KPMG. November 18th, 2016.

Recommendations:

In order to improve the quality of education to develop and put into regular practice mechanisms to encourage employers to participate in the implementation of the main educational programme.

It is recommended to further develop opportunities for deeper interaction with employers / industry on the potential educational programmes for employees, including part-time and flexible programmes.

Additional information:

The statement of self-assessment of educational institution provides information about the results of the survey of employers in terms of their satisfaction with the quality of training of graduates.

At the same time, answering the question "How long did it take a young specialist to get into the course of the matter?" all employers indicated a period from 3 to 6 months.

During the interviewing, employers expressed their desire to increase practice-oriented training of graduates, including teaching them skills in working with application programmes such as Statistics, Turbo-bookkeeper, 1C solutions, etc. In addition, it was proposed to introduce

depth studying of databases, enterprise architecture in the "Business Informatics" master programme.

10. Students' participation in the programme management

Evaluation of criterion: excellent

Strengths of the programme:

Intra-university normative documents establish that students participate in the management of the educational programme through the following organisational structures and procedures: the Council of Young Scientists; Student Council; Monitoring of the quality of teaching; Treatment of students in the virtual reception hall.

Recommendations:

To respond promptly to students' opinions about the quality of teaching individual disciplines and the quality of the educational programme in terms of individual indicators.

Additional information:

During the on-site visit, the reviewer analysed the participation of master students in determining the content of the educational programme "Information Business Analytics". The question was posed: "Are you attracted to the assessment of classes and professors?", and all 100% of the respondents answered positively.

11. Student's services at the programme level

Evaluation of criterion: excellent

Strengths of the programme:

The SPSU Student Council operates in SPSU. The SPSU Student Council includes the chairmen of the student councils of all SPSU academic and research divisions. More than 300 students take part in the work of Student Councils.

More than 15 creative clubs and studios operate in SPSU, including:

Career Club, English Club, SPSU Theatre Studio, SPSU Student Choir, Jazz Vocal Studio, Pop Vocal Studio, Dance Sport Club, Fine Art Studio, etc.

In 2012, the Psychological Aid Service was established in SPSU to provide assistance and support in solving various psychological problems and overcoming difficult life situations.

The SPSU has a Department of Practices, Internships and Employment, which interacts with leading Russian and foreign companies offering interesting positions for internships and permanent or temporary jobs.

Recommendations:

To inform master students more actively about the work of student services and involve students in the work of student government bodies.

Additional information:

During the on-site visit, the reviewer analysed Master students' awareness of the work of student self-government bodies.

Based on the analysis of the presented data, the reviewer concludes that the master students do not take part in the work of student self-government bodies, since all 100% of the respondents answered this question negatively. This is explained by the fact that all master students are working.

The students' answers to the question "Is there a documented system for examining students' appeals and complaints?" are 100% positive.

12. Career guidance and preparation pf applicants

Evaluation of criterion: excellent

Strengths of the programme:

The Master's programme "Information business analytics" is popular among entrants, as evidenced by the high introductory average score:

In 2015, the average score was 88.6;

In 2016, the average score was 76.8.

Recommendations:

To involve students in career-oriented work more actively, which, as practice shows, is very effective.

Additional information:

Based on the received data on the high passing score for the "Information Business Analytics" master's programme, the reviewer concludes that the organisation of career-oriented work in SPSU is good.

The management of the programme has close interaction with university-wide services in the field of career guidance for entrants.

CVs of reviewers

Reviewer's name: **Lyudmila S. Onokoy**

Place of work, position	Financial University under the Government of the Russian Federation
Academic degree, academic title	Doctor of Sociology, Academic
Deserved titles, degrees	Honorary Worker of Higher Education
Education	Higher education
Professional achievements	
Research interests	IC design methodology
Practical experience in the direction of the programme subject to assessment	7 years

Reviewer's name: **William Bennett**

Place of work, position	Technological Institute Letterkenny, Vice-Rector for Education Quality
Academic degree, academic title	Master of Arts, Master of Philosophy
Deserved titles, degrees	
Education	Higher education
Professional achievements	Member of the project team for the development of a higher education strategy for Northern Ireland
Research interests	Assessment of quality and quality assurance of education
Practical experience in the direction of the programme subject to assessment	10 years

Reviewer's name: **Andrey V. Yesenkov**

Place of work, position	ZAO "Krok Incorporated", reviewer
Academic degree, academic title	
Deserved titles, degrees	
Education	Higher education
Professional achievements	
Research interests	IT
Practical experience in the direction of the programme subject to assessment	More than 10 years

Reviewer's name: **Azamat Kudaev**

Place of work, position	SPSU, a student of the Master's programme
Academic degree, academic title	
Deserved titles, degrees	
Education	Higher education
Professional achievements	
Research interests	IT
Practical experience in the direction of the programme subject to assessment	