SUMMARY REPORT

on international public accreditation of the cluster of educational programmes in

«Business Informatics» (38.03.05, 38.04.05)

delivered by Peter the Great St. Petersburg Polytechnic University

2021

While preparing this Summary Report we used information from the Self-Evaluation Report and the Report on the External Review of the cluster of educational programmes in «Business Informatics» (38.03.05, 38.04.05) delivered by Peter the Great St. Petersburg Polytechnic University.

The presentation document for the use by the National Accreditation Board.

CONTENTS

GENERAL INFORMATION ON EDUCATIONAL INSTITUTION

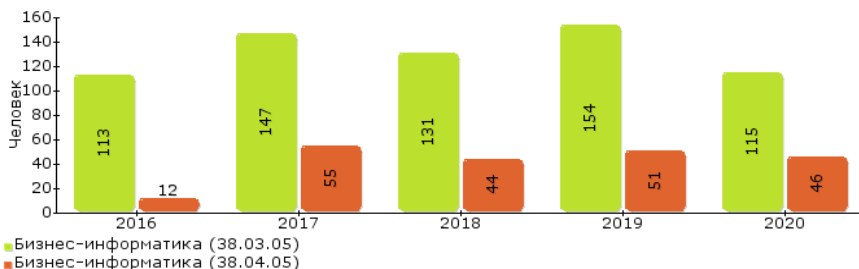|	
Full name of the educational institution	*Federal State Autonomous Educational Institution of Higher Education «Peter the Great St. Petersburg Polytechnic University»*
Founders	*Ministry of Science and Higher Education of the Russian Federation*
Year of foundation	*1899 — Polytechnic Institute in Saint Petersburg* *1910 — Emperor Peter the Great Saint Petersburg Polytechnic Institute* *1914 — Emperor Peter the Great Petrograd Polytechnic Institute* *1922 — Kalinin First Petrograd Polytechnic Institute* *1924 — Kalinin Leningrad Polytechnic Institute* *1990 — Leningrad State Technical University* *1992 — Saint Petersburg State Technical University* *2002 — State Educational Institution of Higher Professional Education «Saint Petersburg State Polytechnic University»* *2011 — Federal State Budgetary Educational Institution of Higher Professional Education «Saint Petersburg State Polytechnic University»* *2014 — Federal State Autonomous Educational Institution of Higher Education «Saint Petersburg State Polytechnic University»* *2015 — Federal State Autonomous Educational Institution of Higher Education «Peter the Great St. Petersburg Polytechnic University»*
Address	*195251, Saint Petersburg, Politekhnicheskaia Str., 29*
Rector	*Andrei Rudskoi, Doctor of Engineering, Professor*
State accreditation	*Series 90Л01 №8982 reg. № 1949 of 19.02.2016 permanent*
License	*Certificate of State Accreditation Series 90A01 № 3118, reg. №2973 of 26.12.2018 till 26.12.2024*
Number of students	*32638* *of whom:* * 25686 are full-time students* * 1046 are part-time students*

INFORMATION ON THE STUDY PROGRAMMES UNDERGOING ACCREDITATION

Educational programmes	*«Business Informatics» (38.03.05), «Business Informatics» (38.04.05)*
Level of training / Standard period of training	*Bachelor's degree programme / 4 years Master's degree programme / 2 years*
Structural subdivision (Head)	*Institute of Industrial Management, Economics and Trade (Vladimir Schepinin, Associate Professor)*
Graduate departments (and their respective heads)	*Graduate School of Management and Business (Igor Iliin, Doctor of Economics, Professor)*
Dates of Review	*April 20-22, 2021*
Person responsible for accreditation from the HEI	*Elena Zima, Candidate of Engineering, Associate Professor, Director of the Centre for Education Quality*

SAMPLING RESULTS OF THE NATIONAL AGGREGATED RANKING BY SUBJECT

HEI	
38.00.00 Economics and Management 38.03.05 «Business Informatics», 38.04.05 «Business Informatics»	Premier League
National Aggregated Ranking of HEIs	Premier League
Total number of Integrated Groups of Training Areas (IGTA) delivered in the HEI	30

Distribution of IGTA in the HEI by the leagues

LEAGUE	Number of IGTA
Premier League	18
1st league	12
2nd league	0
3rd league	0
4th league	0

12
40%

18
60%

- Premier League
- 1st league
- 2nd league
- 3rd league
- 4 league

Russian Federation	
Number of HEIs implementing similar IGTA in the RF	501

Distribution of HEIs by the League within the IGTA

LEAGUE	Number of HEIs
Premier League	33
1st league	97
2nd league	140
3rd league	134
4th league	97

97
19%

33
7%

97
19%

134
27%

140
28%

- Premier league
- 1st league
- 2nd league
- 3rd league
- 4th league

ACHIEVEMENTS OF THE STUDY PROGRAMMES

Quality of implementing the study programmes

High quality of the cluster «Business Informatics» is ensured by high qualification of the teaching staff; regular qualification enhancement; research and project activities of the teaching staff and students; extensive international ties and international mobility of students and teachers; close cooperation with employers; high demand for the graduates.

Provision of up–to-date education

The students are involved in research and project activities, grant projects, contract-based research; they write research articles and scientific conference abstracts; present the outcomes of research at international conferences and competitions.

Teaching staff

The teaching staff of the Graduate School of Management and Business comprises 4 Doctors of Sciences and 22 Candidates of Sciences. Practitioners from various IT-communities are involved in delivery of the programmes.

Competency of the teachers is ensured by the certificates of qualification enhancement.

More than 75% of teachers, who deliver Bachelor programmes, and more than 80% of teachers, who deliver Master programmes, have an academic degree and (or) an academic title.

One teacher won the competition «Young Researcher of SPbPU» in 2020.

Independent assessment of student learning outcomes

Students participate in regional, Russian and international olympiads, competitions and research conferences.

7

Every year the students take part in the olympiad «Ya Professional» (I am a professional) in the following categories: «Business Informatics», «Software Engineering and Information Technologies», «Economics», etc. High level of students' training is verified by award-winning places.

A student of the programme «Business Engineering» won a grant competition of the Committee for Science and Higher School.

Educational resources

The educational programmes are provided with necessary material and technical resources in compliance with the requirements. There are equipped laboratories at the Graduate School of Management and Business for students' training and research and project activities: research laboratory «Digital technologies in Business and Education» and laboratory «Modern Control Technologies».

There is an Informational and Library Complex that gives access to necessary information.

The students have free access to electronic resources of famous foreign and national publications, databases, library systems, which include Elsevier eBooks Collections and Web of Science.

Research activity

High qualification of the staff, research and academic performance of teachers and students promote growth in the number and capacity of grants and contract-based research in Business Informatics. In 2018-2020 the total amount of grant projects was 13 250 000 rub., and contract-based research – 10 159 000 rub.

The Graduate School of Management and Business holds an annual international conference «Digital Technologies in Logistics and Infrastructure».

A number of leading teachers are involved in the grant project to establish a World-Class Research Centre «Advanced Digital Technologies», as well as the project «Digital Modeling and Forecasting in Biomedical Systems» (2020-2025).

The teachers regularly publish the outcomes of their research: for the last 5 years 705 works were published, including 199 publications in journals of the Higher Attestation Commission; 13 monographs; 20 course books, 30 study guides, electronic teaching materials and recommendations.

For the last 3 years 1 thesis for a Doctor's degree and 7 theses for a Candidate's degree were defended; 3 scholarships of the President and government of the Russian Federation for Master students were received.

Academic mobility of students

The Graduate School of Management and Business develops student mobility. The students regularly take part in academic mobility programmes, have an opportunity to study a double degree programme abroad at LUT UNIVERSITY (Finland).

The students participate in research internships, national and international research conferences, national olympiads.

Employability of graduates

The graduates are in demand on the labour market. They work in large consulting, industry-specific and IT-companies; as teachers in HEIs; in other spheres of national economy.

Every year several graduates continue postgraduate studies at SPbPU in terms of the research school under the Graduate School of Management and Business.

International projects

The staff of the Graduate School participate in international conferences, seminars, internships, projects: ERASMUS+ «Joint programme for postgraduate students in software engineering», joint projects with HEIs from Finland, Great Britain, Denmark, Germany, United Arab Emirates.

EXTERNAL REVIEW PANEL

Wolfgang Renninger (Erlangen, Germany)

Review Chair, foreign expert

> *Business Administration and Management (1997-2017), Academic Head of Internal Quality Management, Technical University of Applied Sciences Amberg-Weiden, member of the FIBAA Accreditation Commission*

A nominee of the Accreditation Agency EVALAG, Germany

Oleg Ignatiev (Moscow, Russia)

Deputy Review Chair, Russian expert

> *Doctor of Engineering, Professor, Vice-Rector for Higher Education Programmes, Academy of Watercolour and Fine Arts of Sergei Andriyaka, former Head of the Educational Policy Office, Head of the Department of Information Technologies in Continuous Education at People's Friendship University of Russia (2011-2014, 2015-2020); former Vice-Rector of Moscow State University of Civil Engineering (2014-2015)*

A nominee of the Guild of Experts in Higher Education

Zhelyu Vladimirov (Sofia, Bulgaria)

Panel member, foreign expert

> *Doctor of Economics, Professor, Faculty of Economics and Business Administration, Sofia University St. Kliment Ohridski, Vice-Rector for Education, member of the Bulgarian Association for HRM, member of the Bulgarian Sociological Association*

A nominee of the National Evaluation and Accreditation Agency (NEAA), Bulgaria

Oksana Kozyreva (Saint Petersburg, Russia)

Panel member, representative of professional community

> *Head of the Department of Organizational and Legal Support and Records Management, Committee for Digital Development of the Leningrad Region*

A nominee of the Committee for Digital Development of the Leningrad Region

Maria Golubeva (Saint Petersburg, Russia)

Panel member, representative of students

> *4th year student, Faculty of Informatics and Applied Mathematics, Saint Petersburg State University of Economics*

A nominee of Saint Petersburg State University of Economics

INFORMATION ON THE LEADING TEACHERS OF THE EDUCATIONAL PROGRAMMES

Igor Iliin

Doctor of Economics, Professor, Director of the Graduate School of Management and Business, leading researcher of the World-Class Research Centre «Advanced Digital Technologies», member of the Thesis Board Д 999.056.02 in 08.00.13 – Mathematical and Instrumental Methods in Economics (Economic Sciences), member of a non-profit partnership of computer software developers «Russoft», member of the European Research Centre in Information Systems

Dzhamilia Skripniuk

Doctor of Economics, Professor, Graduate School of Management and Business, certified expert of the Federal Register of Experts in the Research and Technology Sphere of the Ministry of Science and Higher Education of the Russian Federation, member of the editorial board of the international journal «Agronomy» (section: Economics and Sociology in Sustainable Agriculture)

Sergei Svetunkov

Doctor of Economics, Professor, Graduate School of Management and Business, member of the expert board in economic sciences of the Russian Foundation for Basic Research, expert of the Russian Science Foundation, member of the International Institute of Forecasters

Roman Marchenko

Deputy Director for students' work placement of the Graduate School of Management and Business, senior teacher of the Graduate School of Management and Business

Alisa Dubgorn

Deputy Director for Project Activities of the Graduate School of Management and Business, senior teacher, researcher of the World-Class Research Centre «Advanced Digital Technologies» in the project «Digital Modeling and Forecasting in Biomedical Systems» (2020-2025)

Aleksandr Lepekhin

Assistant at the Graduate School of Management and Business, winner of the grant competition for students from Saint-Petersburg HEIs, postgraduate students, industry-specific and academic institutes of Saint-Petersburg

COMPLIANCE OF THE EXTERNAL REVIEW OUTCOMES WITH THE STANDARDS

STANDARD 1. Policy (goals, development strategy) and quality assurance procedures of a study programme

Compliance with the standard: **substantial compliance**

Good practice:

The regulations of the internal system of quality assurance comply with the development programme and mission of the University and with the programmes of development of higher education in Russia.

The education quality assurance system at IIMET is based on the educational policy of the University and corresponds to its development strategy.

All stakeholders, including the Student Commission on Education Quality, are involved in the development and improvement of quality assurance system.

Areas for improvement:

The University should create the quality management system on the basis of international standards or their combinations by establishing regulations and criteria for evaluation of quality of the educational programmes.

The University should document and provide regular participation of stakeholders in creation and support of the Quality Policy and the quality management system.

The University should increase awareness of all stakeholders about the possibilities of participation in the procedures of the quality assurance system.

The University should more actively use external independent audits of the quality management system.

STANDARD 2. Design and approval of programmes

Compliance with the standard: **full compliance**

Good practice:

The University has documented procedures of development, approval, monitoring, periodical assessment and review of the educational programmes in compliance with the strategic goals of the University with the account of scientific and technological development of the country's economy, as well as opinions of the students, employers and other stakeholders.

12

The University ranks 3rd in Russia in the number of online courses on the National platform of open education. There are 74 courses on the portal "Modern digital educational environment in the Russian Federation", 26 courses on the international platform Coursera.

The educational programmes are delivered in compliance with the requirements of the University own educational standards.

Areas for improvement:

The University should enhance the participation of stakeholders (teaching staff, students, employers) in the processes of development, approval, monitoring, periodical assessment and review of the educational programmes.

When developing the learning outcomes the University should consider and use foreign qualification frameworks in addition to the local qualification frameworks and professional standards.

STANDARD 3. Student-centred learning and assessment

Compliance with the standard: **full compliance**

Good practice:

The University has developed an approach to structuring of the educational programmes, due to which the students have many opportunities in designing an individual learning path: changing specialization of the educational programme, continuing studies for a Master's degree (2+2+2 model), attending lectures on personal development or choosing modules of academic mobility programmes, etc.

There are special services that help foreign students.

The students are involved in the processes of development and improvement of the educational process and programmes by participating in surveys during attestation of the teachers, regular questionnaires on contentment with the quality of the educational programmes, their content and relevance.

The main mechanism of independent evaluation of learning outcomes of participation of students in regional, national and international olympiads and research conferences.

Results of independent evaluation[*]

IGTA	Entry mark (USE)	Evaluation during studies (olympiads, FEPE, FEPE-pro, etc.)	Certification exams of graduates (FIEB, etc.)
38.00.00	A	E	A

[*]*Data from the portal «Aggregator of Independent Evaluation of Higher Education» (https://best-edu.ru/)*

Areas for improvement:

The University should expand the possibilities of the students in establishing the requirements to the content of the elective disciplines of the individual learning path.

The University should document and make specific the tutoring system and inform the students about the possibilities of consulting and academic support.

The University should carry out systematic work on independent external review of quality of the educational programmes also in the forms of olympiads, conferences and state final attestation (accreditation).

STANDARD 4. Student admission, support of academic achievements and graduation

Compliance with the standard: **full compliance**

Good practice:

The University uses effective and clear procedures of applicants' admission, reinstatement and transfer of students (Russian and foreign).

There is a Centre for the Expertise of Foreign Education Documents (CEFED). The system of rules and procedures for recognition of qualifications and education received in other national and foreign HEIs is developed and effectively used.

Students' mobility is carried out on a competitive basis. Full information on academic mobility programmes is available on the University website; the system of students' support is organized. In 2016-2020 76 students of the cluster «Business Informatics» participated in the academic mobility programmes.

Areas for improvement:

The University should promote students to participate in academic mobility programs, expand external funding opportunities for these activities. The University should strengthen students' awareness about joint programmes.

The University should supplement educational programmes with adaptation and developmental courses (elective courses) taking into account the level of training and student's needs, including foreign ones (corrective, developmental, interdisciplinary and advanced courses).

STANDARD 5. Teaching staff

Compliance with the standard: **full compliance**

Good practice:

Highly qualified teachers work at the Institute. There is a system of financial support of teachers' research on the basis of the ranking. The

system of independent voluntary accreditation of the teachers is developed and used.

The University won the competition «The Best Staffing Technologies of Saint Petersburg-2020» in the nomination of «The Best Staffing Technology of Staff Evaluation».

Employers and foreign teachers are actively involved in the educational process. Master programmes are also delivered by teachers from other educational institutions, including foreign universities (from the Netherlands, Finland, Germany).

The teachers are involved in research, grant and publication activities (in 2016-2020 705 research and methodological works were published).

IGTA	HIRSCH INDEX (quartile)
38.00.00	61 (first quartile)

Areas for improvement:

The University should expand opportunities of involving the teaching staff to participate in international projects, internships and academic mobility programs.

The University should enhance the preparation system of the teaching staff in foreign languages on a regular basis. The University should develop a system of incentives for the teaching staff to teach in foreign languages (extra bonuses, performance-based contracts of employment).

STANDARD 6. Learning resources and student support

Compliance with the standard: **full compliance**

Good practice:

The educational programmes are fully provided with material and technical resources that correspond to the requirements of working programmes of disciplines: classrooms (provided with video projection equipment), computer classrooms (provided with all necessary equipment and software).

SPbPU has an electronic informational and educational environment, which includes library and information resources. The informational and library complex has a library stock of 4 million printed copies; there are own electronic collections; electronic databases are used to meet requirements of the academic process and research.

The University has the electronic informational environment and the Centre for Psychological Counseling, which supports students; the University has own TV studio.

There are various student unions, i.e. trade union, Student Club, Public Institute "Adapters", Student Council, Sports Club "Polytechnic", Culture

and Education Centre "Harmony", Design and Technology Bureau, Economics Club, Fablab, Student Scientific Society, Student Engineering Society (SIO), Sports and Technical Creativity Club "Extreme", etc.

Areas for improvement:

The University should expand, make systematic and document methods of collecting feedback from the students and employers on organization of the educational process. The University should develop more informative feedback survey forms on the University website.

The University should expand and improve information, cultural and educational resources in English.

STANDARD 7. Collection, analysis and use of information for managing the study programme

Compliance with the standard: **substantial compliance**

Good practice:

The University has a unique and developed electronic informational and educational environment, which provides effective delivery of the educational programmes under review and an access for all stakeholders to the information on the process and results of the programmes' delivery.

Management of the educational programmes is carried out via electronic subsystems: students' academic progress, academic workload, design of the educational programmes, training schedule.

The students are involved in management of the educational programmes through participation in representative and consultative bodies of the Institute and University (IIMET Academic Council, SPbPU Academic Council, Educational and Methodological Council of SPbPU, etc.).

Areas for improvement:

The University should continue improvement of the current infrastructure to close loops in monitoring and data analysis on the educational programmes by providing regular participation of the students, teachers and employers.

The University should make specific and expand the list of parameters of the educational programmes related to the criteria of their quality (including external evaluation).

The University should include the recommendations of employers on the development of the content of the educational programmes in the reviews of practical training and research works.

STANDARD 8. Public information

Compliance with the standard: **full compliance**

Good practice:

The website contains detailed information on the University's performance, regulations, educational standards and programmes, teaching staff and administration. The information is publicly available on the official website and in a student's personal account.

Up-to-date information about the educational programmes and research is fully available on the website in English.

The Career Development Department deals with graduates' employment and provides information on vacancies in various companies. The Youth Career Forum provides opportunities for meetings of employers and students.

According to the website ranking Webometrics published in February 2021, SPbPU website ranks 6th among Russian HEIs and 605th in the world.

Areas for improvement:

The University should expand functionality and content of the University website in English, including sections of the Institute of Industrial Management, Economy and Trade, as well the Graduate School of Business and Management.

The process of collecting data on graduates' employability and their professional path should be documented and structured.

The University should update a strategy to strengthen ties with the professional community in order to identify their qualification requirements for the graduates.

STANDARD 9. On-going monitoring and periodic review of programmes

Compliance with the standard: **substantial compliance**

Good practice:

The procedures of monitoring of the educational programmes comprise cooperation with graduates working in the field. During the meeting the graduates noted that their suggestions are taken into account when updating the educational programmes. Some graduates are involved in teaching and organization of practical training.

Each educational programme of the cluster «Business Informatics» is reviewed by representatives of the professional community.

The graduates receive positive feedback on the quality of training from companies, which is approved by letters of appreciation and reviews from enterprises such as KORUS CONSULTING GK LLC, SAP CIS LLC, Dialogue

17

IT LLC, NAUKA LLC, Netrika LLC, Almazov National Medical Research Centre.

Every year the Centre for Education Quality carries out surveys of students about quality and content of education as well as satisfaction with the conditions and resources. Surveys of students, employers and graduates are regularly held in order to analyze their contentment with the training.

Areas for improvement:

The University should eliminate shortcomings in the procedure of educational programmes evaluation by introducing clearer and more transparent criteria for their quality, as well as assessment regulations.

The University should expand cooperation with employers, subject-specific ministries and departments in order to monitor the changing demands and expectations of the professional community.

The University should provide more active involvement of graduates and employers in the procedures of monitoring of educational programmes' effectiveness at all stages of their life cycle.

STANDARD 10. Cyclical external quality assurance of study programmes

Compliance with the standard: **full compliance**

Good practice:

The University has a system of regular evaluation of quality of the educational programmes on the basis of a wide range of criteria, which include quality of training, teaching, staffing, etc.
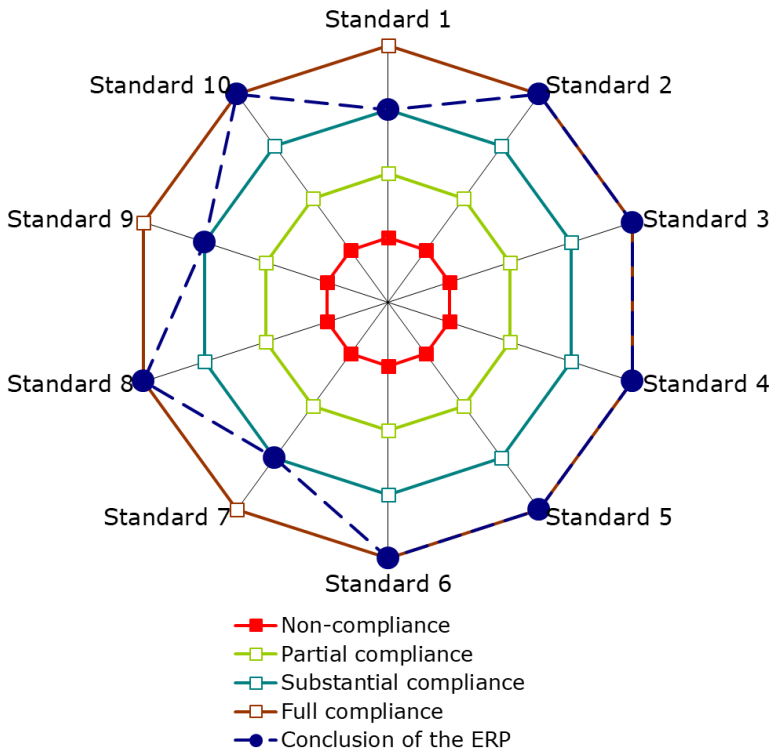
On October, 2020 SPbPU became a participant of independent evaluation of quality of the educational programmes' delivery. The evaluation was carried out with the account of opinions of students and the University staff. It included questionnaire of the students, teachers, researchers and SPbPU administration, analysis of the University website, and visit of an independent expert. SPbPU showed high results.

Areas for improvement:

The University should develop follow up procedures and project management structures to monitor the implementation of approved educational activities.

Information on the results of external quality assurance should be available on the University website.

DISTRIBUTION DIGRAM
OF THE EXTERNAL REVIEW OUTCOMES

- Non-compliance
- Partial compliance
- Substantial compliance
- Full compliance
- Conclusion of the ERP

Standard 1. Policy (goals, development strategy) and quality assurance procedures of a study programme
Standard 2. Design and approval of programmes
Standard 3. Student-centered learning and assessment
Standard 4. Student admission, support of academic achievements and graduation
Standard 5. Teaching staff
Standard 6. Learning resources and student support
Standard 7. Collection, analysis and use of information for managing the study programme
Standard 8. Public information
Standard 9. On-going monitoring and periodic review of programmes
Standard 10. Cyclical external quality assurance of study programmes

CONCLUSION OF THE EXTERNAL REVIEW PANEL

Based on the self-evaluation report analysis, documents and data submitted the External Review Panel has come to the conclusion that the cluster of educational programmes in «Business Informatics» (38.03.05, 38.04.05) **fully** complies with the standards and criteria of public accreditation of the National Centre for Public Accreditation.

The External Review Panel recommends that the National Accreditation Board accredit the cluster of educational programmes in «Business Informatics» (38.03.05, 38.04.05) delivered by Peter the Great St. Petersburg Polytechnic University for the period of **six** years.

SCHEDULE OF THE SITE VISIT OF THE EXTERNAL REVIEW PANEL

Time	Activity	Participants	Venue
April 20, Tuesday			
8.30	Arrival at the University		
09.00 — 09.30	Internal meeting of the Panel		Kapitca Hall, 29, Polytekhnicheskaia Str.
09.30 — 11.15	**Meeting of the ERP with the University administration and people responsible for accreditation**	Rector, Vice-Rectors, people responsible for accreditation, ERP	Kapitca Hall
11.15 – 14.00	**Tour of the central campus** (White Hall, library, museum, tochka kipenia (boiling point), Laboratory of Lean Production, Supercomputer Centre, TV studio, video studio and studio of self-recording, Centre of Open Education, Testing Centre, sports complex, classrooms, coworking, computer classroom, Laboratory of Project Technologies)		29, Polytekhnicheskaia Str. 27, Polytekhnicheskaia Str. 50, Polytekhnicheskaia Str.
14.00 — 15.00	Lunch		
15.00 — 16.00	**Meeting with Institute Director, Deputy Directors**	Institute Director, Deputy Directors, ERP	Room 1427, 50, Novorossiiskaia Str.
16.00 — 17.00	Internal meeting of the Panel	ERP	Room 1428
17.00 — 18.00	**Meeting with graduates**	Graduates, ERP	Room 1427

Time	Activity	Participants	Venue
April 21, Wednesday			
8.30	Arrival at the University		
09.00 — 10.00	Work with documents, website, materials Discussion Visiting classes (optional)		Room 1428, 50, Novorossiiskaia Str.
10.00 — 10.15	Break		
10.15 — 11.15	**Meeting with teachers**	Teachers, ERP	Room 1427
11.15 — 11.30	Break		
11.30 — 12.30	**Meeting with Heads of Graduate Schools, supervisors of educational programmes, Deputy Directors**	Heads of Graduate Schools, Deputy Heads, ERP	Room 1427, 50, Novorossiiskaia Str.
12.30 — 13.30	Lunch		
13.30 — 13.45	Break		
13.45 — 15.00	**Meeting with students**	Students, ERP	Room 1427
15.00 — 15.15	Break		
15.15 — 16.15	**Meeting with employers**	Employers, ERP	Room 1427
16.15 — 17.30	Filling in individual assessment forms, work with documents	ERP	Room 1428
April 22, Thursday			
9.00	Arrival at the University		50, Novorossiiskaia Str.
09.15 — 12.45	Internal meeting of the Panel: discussion of preliminary results of the site visit, preparation of the oral report of the Panel	ERP	Room 1428
12.45 — 13.00	Transfer to the Main Building, 29, Polytekhnicheskaia Str.		
13.00 — 14.30	**Closing meeting of ERP with the representatives of the University**	ERP, University administration, Heads of Graduate Schools, ERP	Room 130, main building, 29, Polytekhnicheskaia Str.
14.30 — 15.30	Lunch		
Departure			