



SUMMARY REPORT OF THE EXTERNAL EVALUATION

of the cluster of educational programmes in

- “Shipbuilding” (180101.65),
- “Ship Power Plants” (180103.65),
- “Shipbuilding, Ocean Engineering and System Engineering of Maritime Facilities Infrastructure” (180100.62),

delivered by the branch of Federal State Autonomous Educational Institution of Higher Professional Education “Northern (Arctic) Federal University” in Severodvinsk

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 "Shipbuilding" (180101.65), "Ship Power Plants" (180103.65), "Shipbuilding, Ocean Engineering and System Engineering of Maritime Facilities Infrastructure" (180100.62), delivered by the branch of Northern (Arctic) Federal University in Severodvinsk.

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

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GENERAL INFORMATION ON EDUCATIONAL INSTITUTION

Full name of the educational institution *Federal State Autonomous Educational Institution of Higher Professional Education "Northern (Arctic) Federal University named after M.V. Lomonosov"*

Founders *Ministry of Education and Science of the Russian Education*

Year of foundation *1929 – Arkhangelsk Institute of Forestry Engineering*
1994 – Arkhangelsk State Technical University
2010 – Northern (Arctic) Federal University
2011 – Northern (Arctic) Federal University named after M.V. Lomonosov

Current state accreditation status:

Type *Educational Institution of Higher Professional Education*

Kind *Federal University*

Location *Arkhangelsk Region, Arkhangelsk, Naberezhnaya Severnoy Dviny, 17*

Rector *Doctor of Physical Sciences, professor Kudryashova Elena*

License *Series AAA No. 002105 reg. No. 1417 dated 15.06.2011; permanent*

State Accreditation *Certificate of state accreditation series BB No. 001043 reg. No.1031 dated 12.07.2011 valid till 22.06.2014 (reissuance)*

Number of students *19819*

GENERAL INFORMATION ON THE BRANCH OF NARFU IN SEVERODVINSK

Full name of the educational institution	<i>Branch of Federal State Autonomous Educational Institution of Higher Professional Education "Northern (Arctic) Federal University named after M.V. Lomonosov" in Severodvinsk, Arkhangelsk Region</i>
Founders	<i>Ministry of Education and Science of the Russian Federation</i>
Year of foundation	<i>1939 – Molotov Shipbuilding Training College 1959 – Severodvinsk Polytechnic Training College 1991 – State Educational Institution of Secondary Vocational Education "Severodvinsk Technical Training College" 2011 – Branch of Federal State Autonomous Educational Institution of Higher Professional Education "Northern (Arctic) Federal University named after M.V. Lomonosov" in Severodvinsk, Arkhangelsk Region Includes the following institutes: Institute of Humanities of NARFU (former Severodvinsk Branch of Pomor State University named after M.V. Lomonosov) Institute of Shipbuilding and Maritime Arctic Engineering of Northern (Arctic) Federal University named after M.V. Lomonosov (former branch of Saint Petersburg State Maritime Technical University in Severodvinsk)</i>
Current state accreditation status:	
Type	<i>Educational Institution of Higher Professional Education</i>
Kind	<i>Federal University</i>
Location	<i>Arkhangelsk Region, Severodvinsk, Voronina St., 6</i>
Rector-Director	<i>Candidate of Technical Sciences Kalistratov Nikolay</i>

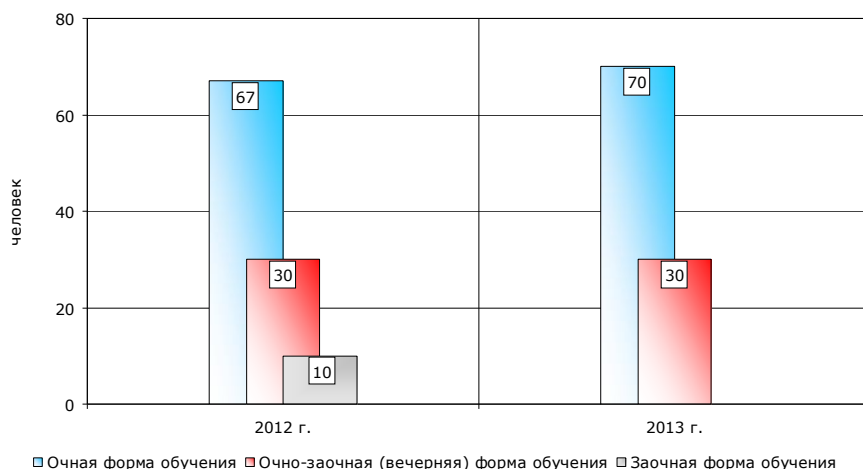
INFORMATION ON THE EDUCATIONAL PROGRAMMES UNDERGOING ACCREDITATION

Educational programmes	<p><i>"Shipbuilding, Ocean Engineering and System Engineering of Maritime Facilities Infrastructure" (180100.62),</i></p> <p><i>"Shipbuilding" (180101.65),</i></p> <p><i>"Ship Power Plants" (180103.65)</i></p>
Level of training / Standard period of training	<p><i>Specialist's Degree Programme / 5 years 6 months*</i></p> <p><i>Bachelor's Degree Programme / 4 years 10 months*</i></p> <p><small>*System "factory-technical HEI", combination of full-time and part-time studies</small></p>
Structural subdivisions (heads)	<p><i>Institute of Shipbuilding, Maritime and Arctic Engineering (Candidate of Technical Science, assistant professor Galperin Viktor)</i></p>
Major departments (heads of major departments)	<p><i>Department of Maritime Electrical Power Industry and Electrical Engineering (Candidate of Technical Sciences Ivlev Mark)</i></p> <p><i>Department of Ocean Engineering and Power Plants (Candidate of Technical Sciences, assistant professor Lychakov Alexander)</i></p> <p><i>Department of Shipbuilding Production and Welding (Candidate of Technical Sciences, Shvaneva Yulia)</i></p>
Date of the site visit	<p><i>September 11-13, 2013</i></p>
Person responsible for public accreditation of the study programme	<p><i>Head of the Office for Monitoring and Forecasting</i></p> <p><i>Vorozhtsova Lyudmila</i></p>

SAMPLING RESULTS OF THE PROJECT "THE BEST EDUCATIONAL PROGRAMMES OF INNOVATIVE RUSSIA"

Indicators	2013
Cluster of the educational programmes in "Shipbuilding", "Ship Power Plants", "Shipbuilding, Ocean Engineering and System Engineering of Maritime Facilities Infrastructure"	
Number of the given programmes in the RF	36
Number of higher educational institutions to offer the given programmes	17
Number of programmes – winners of the project (% from total amount of these programmes offered in the RF)	12 (33%)
Arkhangelsk region	
Number of the given programmes offered in the region	3
Number of programmes – winners of the project (% from total amount of these programmes offered in the region)	3 (100%)
Number of higher educational institutions and subsidiaries in the region	20
Total number of programmes offered in the region	207
Total number of programmes – winners of the project (% from total amount of these programmes offered in the region)	14 (7%)

REFERENCE DATA ON STUDENT ENROLLEMENT FOR PROGRAMMES "SHIPBUILDING, OCEAN ENGINEERING AND SYSTEM ENGINEERING OF MARITIME FACILITIES INFRASTRUCTURE" (180100.62)



ACHIEVEMENTS OF THE EDUCATIONAL PROGRAMMES

Quality of the delivered educational programmes

The study programmes undergoing accreditation were recognized as the best within the project "Best Educational Programmes of Innovative Russia" in 2011, 2012 and 2013.

Employability of graduates

Practice oriented system of training "factory – technical HEI" is actively developed; all students are employed in the departments of basic enterprises of JSC "United Shipbuilding Corporation" in Severodvinsk.

Provision of up-to-date education

In 2013 re-engineering of the study programmes was carried out and training modules were unified and coordinated taking into account the CDIO methodology (Conceive – Design – Implement – Operate). The work was started for placement of educational resources in the system of distance learning Sakai. Agreed decisions were made on the establishment of branches of the departments of JSC "Sevmash", JSC "Arktika", etc.

Scientific activity

The institute won the project "Development of manufacturing of high-tech products – powerhelm units and their components for ice-class vessels" in cooperation with JSC "Zvezdochka". Over the last 5 years teachers of the Institute of Shipbuilding and Maritime Arctic Engineering obtained 12 patents and published 15 scientific-methodological papers with the stamp of Educational Methodological Association in Maritime Engineering. Two students of the institute obtained nominal grants in 2012.

Material and technical base

230 million roubles were invested in the development of the institute. 9 educational and research laboratories, which were established for Maritime Electrical Engineering, Power Engineering and Automation, are considered the best in the RF for equipment configuration (65 million roubles). New scientific equipment for "Heat Engineering Measurements" and "Information and Measurement Systems and Complexes" was purchased (16 million roubles) as well as information and manufacturing equipment (40 million roubles).

Most of classes and laboratories of the institute are equipped with multimedia complexes and videoconference hardware. High speed communication channel was out into operation, about 120 computers including modern graphics workstations are combined into a single network with Internet access.

EXTERNAL REVIEW PANEL



Bugakova Nina (Russia)

Review Chair, Russian expert

Doctor of Pedagogical Sciences, professor, first vice-rector, Kaliningrad State Technical University, member of the Guild of Experts in the sphere of professional education

A nominee of the Guild of Experts in the sphere of professional education



Rima Mickeviciene (Lithuania)

Deputy Review Chair, foreign expert

Doctor of Technical Sciences, professor, Dean of Maritime Engineering Faculty, Klaipeda University

A nominee of the Centre for Quality Assessment in Higher Education (SKVC)



Bezyukov Oleg (Russia)

panel member, Russian expert

Doctor of Technical Sciences, professor, acting member of the Academy of Transport of the RF, Chair of the Department of Theory and Construction of Marine Combustion Engines, Marine Engineering Faculty, State University of Maritime and Inland Shipping n. a. Admiral Makarov

A nominee of the Guild of Experts in the sphere of professional education



Shilovskiy Vladimir (Russia)

panel member, representative of professional community

Deputy Chief Designer of JSC "Sevmash"

A nominee of the Regional Employers Association "Union of Industrialists and Entrepreneurs of Arkhangelsk Region"



Bulygina Veronika (Russia)

panel member, representative of students

5th year student of the Faculty of Pediatrics, Northern State Medical University

A nominee of the National Centre for Public Accreditation

COMPLIANCE OF THE EXTERNAL REVIEW OUTCOMES WITH THE NCPA'S STANDARDS

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

Compliance with the standard: **substantial compliance**

State of affairs

The Institute of Shipbuilding and Maritime Arctic Engineering delivers educational programmes of continuous multi-level education in the field of maritime engineering on the basis of deep integration of scientific and educational activity.

The university administration clearly defined development goals for the university as a whole and for each institute.

It is mentioned that the elements of internal quality assurance system are available but there is no continuity of this system.

Implementation of the cluster of educational programmes takes into account the requirements of employer for quality assurance.

Close cooperation of employer, university administration and teaching staff in the delivery of practice oriented training and updating material base in compliance with the requirements of the shipbuilding industry is noted.

Areas for improvement

- The mechanism for evaluation of effectiveness and adjustment of the procedures for quality assurance of the study programmes should be improved.
- A number of procedures for quality management system are a mere formality.
- The procedures should be developed to involve students in formation of the development strategy and the contents of the study programmes including their availability.
- The work should be continued to establish and implement the system of quality assurance of educational programmes as an integrated system.

STANDARD 2. Approval, monitoring and periodic review of study programmes

Compliance with the standard: **partial compliance**

State of affairs

Revision of the working curricula and programmes of the disciplines is conducted annually in compliance with the goals and results of the study programmes: content of the working curricula and methodological materials which ensure delivery of the particular educational technology is updated taking into account the development of shipbuilding industry and the opinion of potential employer.

Educational process, preparation of the regulatory documents, monitoring and control of the development and delivery of the study programmes are coordinated by the office for educational process organization.

Methodological commission of the institute considers and submits for approval the curricula and working programmes of the disciplines.

Study programmes undergoing accreditation are worked out and agreed with employers ("Sevmash", "Zvezdochka", "Arktika", etc.) within the system of continuous multilevel training.

Areas for improvement

- Monitoring of the effectiveness of programmes' delivery for all stakeholders (employers, teachers and students) should be conducted on a regular basis.
- The system should be created for taking into account students' opinions in working out the curricula and programmes of the disciplines.

STANDARD 3. Assessment of student learning outcomes / competencies

Compliance with the standard: **substantial compliance**

State of affairs

Students take an active part in scientific and research activity at the departments and the enterprise; student training is practice-oriented (theoretical training in the 1st semester and practice at the enterprise in the 2nd semester).

The procedure for assessment of student learning outcomes/competencies within interim and final attestation is regulated by the documents which are worked out by the appropriate departments. In the curricula clear criteria and objective procedures for assessment of the learning outcomes are defined. Graduates are employed according to their specialization.

Students are involved in solving practical knowledge intensive problems which is reflected in graduation qualification works.

Specificity of the programmes undergoing accreditation does not involve the development of international student mobility.

Areas for improvement

- The list of interim assessments of the learning outcomes should be worked out for each student and the availability of this list should be ensured.
- The procedure for assessment of knowledge should be brought into compliance with the planned learning outcomes.
- The opportunities should be found for ensuring student mobility taking into account the specificity of the study programmes.

STANDARD 4. Quality assurance of teaching staff

Compliance with the standard: **full compliance**

State of affairs

The panel notes high level of the teaching staff competence in the areas covered by the study programmes undergoing accreditation and close connection of the educational process with research. Leading specialists from the enterprises are involved in teaching professional disciplines.

The institute pays enough attention to professional development of teachers and their participation in various projects with other HEIs. The HEI has an opportunity to involve professors from other universities.

Flexibility of the teaching staff structure makes it easy to adapt to the new professional requirements of employer.

Areas for improvement

- The rating system of assessment of the teachers' activity "through the eyes of students" should be developed.
- Teachers should publish more textbooks, educational and methodological materials within the educational programme with the stamp of Educational Methodological Association.
- The work should be intensified to involve graduates in postgraduate training followed by thesis defense.
- Academic mobility of the teaching staff including the cooperation with foreign HEIs as well as publication activity of the teachers in both Russian and foreign leading journals should be intensified.

INFORMATION ON THE LEADING TEACHERS OF THE EDUCATIONAL PROGRAMMES

Alpin Alexander

Professor of the Department of Ocean Engineering and Power Plants, Doctor of Technical Sciences, laureate of the RF Government prize in the sphere of science and technology

Galperin Viktor

Professor of the Department of Maritime Electrical Power Industry and Electrical Engineering, Candidate of Technical Sciences, honoured worker of higher education of the RF

Ivlev Mark

Chair of the Department of Maritime Electrical Power Industry and Electrical Engineering, Candidate of Technical Sciences, assistant professor

Kuznetsov Vladimir

Professor of the Department of Ocean Engineering and Power Plants, Doctor of Technical Sciences

Kulikov Konstantin

Director General of JSC "Omega", assistant professor of the Professor of the Department of Ocean Engineering and Power Plants, Candidate of Technical Sciences, laureate of the award named after Lomonosov (2000, 2009)

Lychakov Alexander

Chair of the Department of Ocean Engineering and Power Plants, Candidate of Technical Sciences, professor, honoured worker of higher education, honoured mechanical engineer of the RF

Nikitin Vladimir

Director General of JSC "Zvezdochka", professor of the Department of Ocean Engineering and Power Plants, Doctor of Technical Sciences, laureate of the State Prize in the sphere of science and engineering, laureate of the Russian Government prize in the sphere of science and engineering, honoured shipbuilder

Pshenitsyn Andrey

Professor of the Department of Ocean Engineering and Power Plants,, Doctor of Technical Sciences

Shvaneva Yulia

Chair of the Department of Shipbuilding Production and Welding, Candidate of Technical Sciences, assistant professor

Cherevko Alexander

Professor of the Department of Maritime Electrical Power Industry and Electrical Engineering, Doctor of Technical Sciences, honoured worker of higher education of the RF

STANDARD 5. Learning resources and student support

Compliance with the standard: **substantial compliance**

State of affairs

Modern material and technical base for the organization of educational and research activity corresponds to the goals and development strategies of the programme. Electronic means of learning and Internet-resources are used for optimization of the process.

Conditions are provided for independent work of students. System of interaction of the major departments with basic enterprises is created.

Disciplines are basically provided with the necessary electronic educational resources, a lot of which are placed in the local university network but not at the educational university servers.

Laboratory and practical classes within the study programmes are carried out in 6 laboratories equipped with modern computer hardware. The institute has classrooms which ensure the opportunity to organize and carry out lectures at a modern technological level.

Areas for improvement

- Action plan should be developed for the creation of electronic textbooks and manuals.
- Publication and availability of educational and methodological materials for students should be ensured.
- Methodology of the system of feedback with students for evaluation of the conditions and organization of the educational process taking into account students' opinions should be developed.
- The work should be continued for modernization of material and technical base.

STANDARD 6. Information system providing effective implementation of the study programme

Compliance with the standard: **partial compliance**

State of affairs

The work is carried out to implement the electronic system of educational process management.

Students are provided with access to educational and methodological materials on the professional disciplines which is ensured on the website of the institute through a personal password.

Areas for improvement

- The mechanism for collection, analysis and distribution of data, necessary for educational programmes management, should be implemented.
- Electronic resources of the institute should be integrated with the resources of the university.
- An integrated local information system should be created in the institute (including the students' hostel) and free Internet access should be provided.

STANDARD 7. Public information

Compliance with the standard: **full compliance**

State of affairs

The institute has an official website. Content of the educational programmes within the cluster 180000 "Maritime Engineering", level of teaching, forms of training and assessments are presented to the full extent.

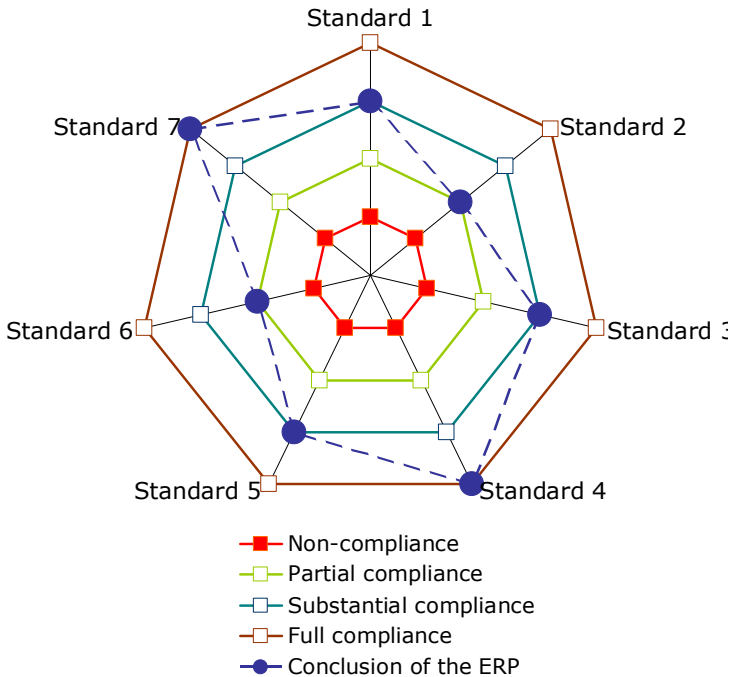
University administration works in close cooperation with employers on enhancement of the content of the study programmes and employment of graduates.

Quality of specialists' training complies with the stated requirements.

Areas for improvement

- Website of the institute is not clearly structured and does not have an English version.
- More information should be placed on the quality of training of students and graduates of the institute.

DISTRIBUTION DIAGRAM OF THE EXTERNAL REVIEW OUTCOMES



- Standard 1. Policy (mission, vision) and procedures for quality assurance
- Standard 2. Approval, monitoring and periodic review of programs and qualifications
- Standard 3. Assessment of student learning outcomes / competencies
- Standard 4. Quality assurance and competencies of teaching staff
- Standard 5. Learning resources and student support
- Standard 6. Information system providing effective implementation of the study programme
- Standard 7. Public information

CONCLUSION OF THE EXTERNAL REVIEW PANEL

Based on the analysis of documents, data and oral evidence presented, the External Review Panel came to the conclusion that the educational programmes in “Shipbuilding” (180101.65), “Ship Power Plants” (180103.65), “Shipbuilding, Ocean Engineering and System Engineering of Maritime Facilities Infrastructure” (180100.62), delivered by the branch of Northern (Arctic) Federal University, to , to a large degree comply with the standards and criteria of public accreditation of the National Centre for Public Accreditation.

Full or substantial compliance is achieved in regard to five standards.

According to the Panel, partial compliance is achieved in regard to the following standards:

- Standard 2. Approval, monitoring and periodic review of programs and qualifications.
- Standard 6. Information system providing effective implementation of the study programme

The identified weaknesses have little effect on the content and delivery of the cluster of programmes, but adjustment is required to ensure the quality of the educational programmes. It is recommended to take appropriate measures in order to achieve full compliance in regard to the specified standards.

The Panel recommends the National Accreditation Board to accredit the cluster of educational programmes providing corrective measures within fixed period.

National Centre for Public Accreditation recommends the National Accreditation Board **to accredit the educational programme in “Shipbuilding” (180101.65) for the delivery period (2 years); “Ship Power Plants” (180103.65) for the delivery period (3 years); “Shipbuilding, Ocean Engineering and System Engineering of Maritime Facilities Infrastructure” (180100.62) for a period of 6 years.**

SCHEDULE OF THE SITE VISIT OF THE EXTERNAL REVIEW PANEL

Time	Activity	Participants	Venue
September 10, Tuesday			
Arrival of the External Review Panel Checking in the hotel and first meeting of the ERP members			
September 11, Wednesday			
8.45	Arrival at the HEI		
09.00 – 10.00	The first meeting of the External Review Panel (ERP) members and coordinators of the review of the educational programmes of NarFU		Naberezhnaya Severnoy Dviny, 17 (Main Building), room 1220
10.00 – 10.30	Internal meeting of the ERP	External Review Panel (ERP)	Naberezhnaya Severnoy Dviny, 17 (Main Building), room 1215
10.30 – 11.30	Meeting of the ERP with university administration and people responsible for accreditation	Rector, vice rectors, Head of the Office for Educational Process Management, Director of the Centre of Licensing, Accreditation and Analysis of Basic HEI Activity, ERP	Naberezhnaya Severnoy Dviny, 17 (Main Building), room 1220
11.30 – 12.30	Arrival at the branch of NARFU in Severodvinsk		
12.30 – 13.30	Lunch		
13.30 – 14.30	Excursion around the university	ERP	
14.30 – 15.30	Meeting with staff members responsible for accreditation of the educational programmes and chairs of the major departments	Проректор-директор филиала САФУ в г. Северодвинске, директор института, заместители директора, заведующие выпускающими кафедрами, ERP	Severodvinsk, Voronina 6, building A, room 215
15.30 – 16.30	Work with documentation/attending classes (upon request of the ERP members)	ERP	Severodvinsk, Voronina 6, building A, room 217
16.30 – 17.30	Meeting with graduates	Graduates, ERP	Severodvinsk, Voronina 6, building A, room 215
17.30 – 18.00	Internal meeting of the ERP	ERP	Severodvinsk, Voronina 6, building A, room 217

September 12, Thursday			
9.45	Arrival at the branch of NArFU in Severodvinsk		
10.00 – 11.00	Meeting with teachers	Teachers, ERP	Severodvinsk, Voronina 6, building A, room 215
11.00 – 11.30	Internal meeting of the ERP	ERP	Severodvinsk, Voronina 6, building A, room 217
11.30 – 12.30	Meeting with students	Students, ERP	Severodvinsk, Voronina 6, building A, room 215
12.30 – 13.00	Internal meeting of the ERP	ERP	Severodvinsk, Voronina 6, building A, room 217
13.00 – 14.00	Lunch		
14.00 – 16.30	Work with documentation/attending classes (upon request of the ERP members)	ERP	Severodvinsk, Voronina 6, building A, room 217
16.30 – 17.30	Meeting with employers	Employers, ERP	Severodvinsk, Voronina 6, building A, room 215
17.30 – 18.00	Internal meeting of the ERP	ERP	Severodvinsk, Voronina 6, building A, room 217
September 13, Friday			
9.45	Arrival at NArFU		
10.00 – 13.00	Internal meeting of the ERP: discussion of preliminary results of the site visit, preparation of the oral report of the panel	ERP	Naberezhnaya Severnoy Dviny, 17 (Main Building), room 1320
13.00 – 14.00	Final Meeting of the ERP with NArFU representatives	ERP, university administration, chairs of the major departments, teaching staff, students	Naberezhnaya Severnoy Dviny, 17 (Main Building), room 1220
14.00 – 15.00	Lunch		Banquet Hall
	Departure		