




SUMMARY REPORT OF THE EXTERNAL EVALUATION


of the Master's degree programme

05.04.06 Ecology
"Environmental Risk Management in the Arctic»

Delivered by the Northern (Arctic) Federal University

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2016



While preparing this Summary Report we used information from the Self-Evaluation Report and the Report on the External Review of the Master's degree programme 05.04.06 Ecology "Environmental Risk Management in the Arctic» delivered by the Northern (Arctic) Federal University

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GENERAL INFORMATION ON EDUCATIONAL INSTITUTION

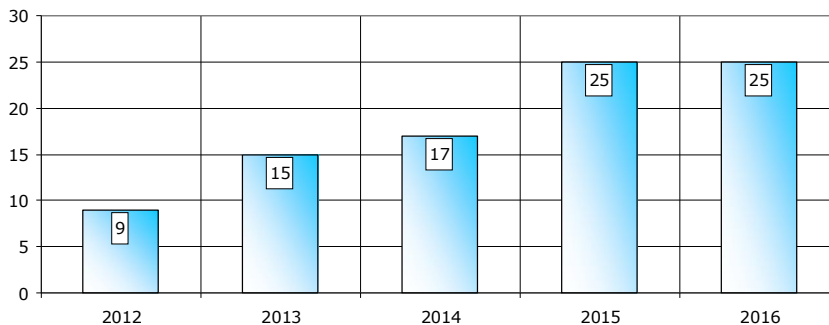
Full name of the educational institution	<i>Federal State Autonomous Educational Institution of Higher Professional Education "Northern (Arctic) Federal University named after M.V. Lomonosov"</i>	
Founders	<i>Ministry of Education and Science of the Russian Federation</i>	
Year of foundation	<i>1929 – 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</i>	
Address	<i>Arkhangelsk Region, Arkhangelsk, Naberezhnaya Severnoy Dviny, 17</i>	
Rector	<i>Doctor of Philology, professor Elena Kudryashova</i>	
License	<i>Series 90Л01 №0009089 per. № 2047 of 31.03.2016, permanent</i>	
State accreditation	<i>Certificate of state accreditation Series 90A01 № 0001948, reg. №1854 of 18.02.2016, valid till 07.05.2020</i>	
Number of students	<i>Full time</i>	<i>9381</i>
	<i>Part time</i>	<i>7547</i>

INFORMATION ON THE EDUCATIONAL PROGRAMMES UNDERGOING ACCREDITATION

Educational programmes	<i>05.04.06 Ecology "Environmental Risk Management in the Arctic»</i>
Level of training / Standard period of training	<i>Master / 2 years</i>
Structural subdivision (head)	<i>Institute of Natural Sciences and Technologies (L. Morozova, Doctor of Biology, Professor)</i>
Director of the Programme	<i>Boris Yurievich Filippov, Doctor of Biology, Associate Professor</i>
Programme coordinator	<i>Svetlana Fyodorovna Lukina, Candidate of Pedagogical Sciouences, Associate Professor</i>
Date of the site visit	<i>27-28 June, 2016</i>
Person responsible for public accreditation of the educational programme	<i>Vorozhtsova Lyudmila Head of the Office for Monitoring and Forecasting</i>

REFERENCE DATA ON STUDENT ENROLLEMENT FOR THE PROGRAMME

05.04.06 Ecology "Environmental Risk Management in the Arctic»45.04.02 »



ACHIEVEMENTS OF THE EDUCATIONAL PROGRAMMES

Quality of the delivered educational programmes

In 2014 the University management system was successfully certified for compliance with the EFQM Model and achieved "5 Star Recognised for Excellence" certificate. Simultaneously the University was certified for the compliance with ENQA standards; in the international ranking of universities ARES (Academic Ranking of World Universities-European Standard ARES-2016) in 2015 and 2016 NArFU holds the position in the category "Good quality performance".

Altogether for the period of 2012-2015 86 study programmes successfully passed public accreditation. In 2014 16 study programmes and in 2015 41 study programmes were recognized as best within the project «The Best Educational Programmes of Innovative Russia». In 2015 programmes 05.03.06 *Ecology*, 05.04.06 *Ecology* were added to this list.

Provision of up-to-date education

The up-to-date contents of the study programmes is achieved by their regular reviewing and updating, implementing the research results of the teachers in the education process, professional development of the teachers, international exchange programmes and participation in subject specific international conferences. The team of the developers of the study programme 05.04.06 *Ecology* "Environmental Risk Management in the Arctic» and the key teachers working on the programme took part in the TEMPUS ALIGN project in 2014-2016.

In updating the programme annual student satisfaction surveys and employers' opinions are taken into account. The research findings of the programme's teachers are introduced in the curriculum. The development and updating of the programme are discussed and reviewed at the expert council of the school with the participation of employer representatives. Thus, the study programme was reviewed by the Deputy Director of N. M. Knipovich PINRO, Head of the Archangel branch, Candidate of Biological Sciences Andrey Semushin.

Competency of the teaching staff

The teaching staff working on the programme comprises 15 members: 2 Doctors of Sciences (13, 3%), 12 Candidates of Sciences (80%), no academic degrees and titles - 1 (6, 7%). All the teachers participated in exchange programmes and joint projects with international partners.

Research

The programme's teachers are actively engaged in research supported by RFFI and Potanin Foundation grants: Research Projects «Mathematic modeling of the processes of growth and development of the water organisms of the White Sea with the purpose of their rational use», №

14-01-98800, code 01-204, РФФИ, 2014 -2016, Grants «Development of teaching and learning materials for the discipline «Mathematical Continuous –time Models» within the Master Degree Programme «Applied Mathematics and Information Technologies», V. Potanin Foundation, 2014-2015., the research project «Development of solutions for the computing infrastructure of high performance applications », № 3628, State contract, 2015 – N.A. Shilova; RFFI-North № 11-04-98800-, RFFI-North № 08-0498808 – M.V. Nikitina. The main research results are presented in numerous publications.

Material and technical resources

The Institute of Natural Sciences and Technologies has adequate and sufficient resources for conducting classes in the sphere of Ecology and risk management: multimedia and computer classrooms, specially equipped laboratories, such as the Laboratory of Media Resources and technologies, Geo-Chemistry Laboratory, the Chemistry Research Laboratory, the "Arctic" Laboratory. The main teaching and learning resources are provided by the University Library (the Intellectual Centre E.I.Ovsyankin Scientific Library) and by the Department for Information and Communication Technologies. The library resources provide sufficient coverage in the field of Ecology and Management of Natural Resources. The University library has a number of electronic resources and has a stock of 620 titles of books in Ecology. The Department for Information and Communication Technologies provides support of University computers. The Institute of Natural Sciences and Technologies has at its disposal 243 computers, which are accessible to all the participants of the programme. The learning materials are placed at the SAKAI educational platform.


Academic mobility of students

The module structure of the curriculum is conducive to academic mobility of students. There is an exchange programme with the Arctic University of Norway (UiT) during the third semester on agreed modules: Module F2: International emergency preparedness and environmental protection in the High North (10 ECTS); Module G2: Safety and risk analysis (10 ECTS); Module H: Academic writing (10 ECTS). At present 50% of the second year Master students have studied on exchange programmes in Norway.

International projects

The teachers of the programme have participated in the following international projects:

- Kolarctic ENPI CBC Programme CETIA — Environment of the coastal area, technologies and innovation in the Arctic (2011-2014);
- TEMPUS: Achieving and checking the alignment between academic programmes and qualification frameworks (ALIGN);

- 
- Economic Aspects of Solid Wood Waste Use. Internationaler Kongress & Fachmesse - EURO – ECO Hannover (2013);
 - ALLMEET - Actions of Lifelong Learning addressing Multicultural Education and Tolerance in Russia” (TEMPUS-IV);
 - Symposium «Coordination and integration of Norwegian, Polish and Russian marine research activities on Svalbard» (2011);
 - Arctic floating university 2014 (expedition), Heritage of Russian America 2010, 2011, 2013 (expedition).

INFORMATION ON THE LEADING TEACHERS OF THE STUDY PROGRAMMES

Tatyana Vepreva

PhD (Education), Associate Professor, Department of Nordic Languages and International Scientific Communication

Irina Tyurikova

PhD in Philosophy, Associate Professor, Department of Philosophy, NArFU

Natalya Shilova

PhD in Mathematics, Associate Professor, Department of Applied Mathematics and High Performance Computing, NArFU

Roman Aleshko

PhD in Technical Sciences, Associate Professor, Department of Information Systems and Technologies, NArFU

Ivan Savelyev

PhD in History, Associate Professor, Head of International Law and Corporative Jurisprudence Department

Tatyana Sorokina

*PhD in Law, Associate Professor,
Department of International Law and Corporative Jurisprudence*

Maxim Zadorin

PhD in Law, Senior Lecturer, Department of International Law and Corporative Jurisprudence

Mikhail Permilovskiy

PhD in Law, Senior Lecturer, Department of International Law and Corporative Jurisprudence

Maria Nikitina

PhD in Chemistry, Associate Professor Department of Chemistry and Chemical Ecology, NArFU

Olga Trubitsina

PhD in Geography, Associate Professor of the Department of Zoology and Ecology, NArFU

Georgiy Sukhanov

PhD in Economics, Associate Professor, Head of the Department of Finance and Credit, NArFU

Ulyana Yakusheva

Senior lecturer, Department of Management

EXTERNAL REVIEW PANEL



Andre Govaert (Belgium)

Review Chair, international expert

Expert of the ALIGN project: visiting professor KULeuven



Zbigniew Palka (Poland)

Deputy Review Chair, international expert

Expert of the ALIGN project: professor, A. Mickiewicz University (Poznan)



Durdica Dragojevic (Croatia)

Panel member, international expert

Representative of CEENQA – quality assurance network of Central and Eastern Europe



Andrey Semushin (Russia)

Panel member, representative of professional community

Candidate of Biological Sciences, Deputy Head, Polar Research Institute of Marine Fisheries and Oceanography (PINRO)



Anastasia Tomilova (Russia)

Panel member, representative of students

2nd year Master student of the programme "Environmental Head of the Department of Psychology of Labour and Psychological Consulting; Moscow State Teacher Training University, Associate Professor Risk Management in the Arctic Студентка 2 курса магистерской программы "Управление экологическими рисками в Арктике"



Ludmila Siluanova (Russia)

Panel member, representative of the Northern (Arctic) Federal University

Higher School of Economics and Management; associate professor, the Northern (Arctic) Federal University



Oksana Matveeva (Russia)

Panel member, NCPA's expert

Deputy Head of the Accreditation Office, National Centre for Public Accreditation



Elina Moon (Russia)

observer

2nd year Master Student of Higher School of Economics



Elena Puchkova(Russia)

Observer

Head of the Department of Psychology of Labour and Psychological Consulting; Moscow State Teacher Training University, Associate Professor

THE GOAL OF THE ALIGN TEMPUS PROJECT

The external review was conducted under the Align Tempus Project “Achieving and Checking the Alignment Between Academic Programmes and Qualification Frameworks”.

The main objective of the project is to enhance the intelligibility, consistency and transferability of qualifications through establishment of mechanisms for HEIs to achieve alignment of academic programmes with NQFs and for QA agencies to check such alignment.

Specific Objectives are:

To promote a better understanding of HEIs and EQA agencies of the role of QFs, their structure, as well as the differences between the different KINDS and LEVELS of student achievement

To build on the capacity of HEIs to write and access learning outcomes that define the various types of student achievement

To build on the capacity of the HEIs to use the QF alignment to facilitate student transfer, joint qualifications and benchmarking

To enable the EQA agencies to check whether proposed learning outcomes and their assessment mechanisms match of QF descriptors at each level by establishing mechanisms for ensuring consistency of judgments across institutions

Align Tempus partners:

European partners: The Central and Eastern European Network of Quality Assurance Agencies in Higher Education (CEENQA), Adam Mickiewicz University in Poland, Koblenz-Landau University (Germany), Bath Spa University (England), Dun Laoghaire Institute of Art, Design and Technology (Ireland), KU Leuven University in Gent(Belgium).

Armenia: Ministry of Education and Science, Yerevan Brusov State University of Languages, Yerevan State Medical University, National Center for Professional Education Quality Assurance (ANQA), Armenian Students’ Association (ANSA), Republican Union of Employers of Armenia.

Russia: Ministry of Education and Science of the Russian Federation, National Centre for Public Accreditation (NCPA), North Arctic Federal University, Moscow State Pedagogical University, the Volga State University of Technology, Russian Student Union, the Russian Union of Industrialists and Entrepreneurs

Ukraine Ministry of Education and Science, Sumy State University, Khmelnytskyi National University, Ukrainian Association of Student Self-government, the Association of Employers.

ALIGNMENT OF CRITERIA

NCPA's Standards	ALIGN TEMPUS Standards
1. Policy (goals, development strategy) and quality assurance procedures of a study programme	1.1 2.4 2.6 2.9
2. Design and approval of programmes	1.1 1.2 1.3 1.4 1.8 1.10 2.1 2.2 2.3 2.6 2.7
3. Student-centred learning, teaching and assessment	1.4 1.5 1.8 2.3 2.4 2.8
4. Student admission, support of academic achievements and graduation	1.5 1.7 1.9 2.5
5. Teaching staff	1.6 2.7 2.10
6. Learning resources and student support	1.6 1.7 1.9 2.10
7. Collection, analysis and use of information for managing the study programme	2.3 2.7
8. Public information	1.7
9. On-going monitoring and periodic review of programmes	1.4 2.1 2.2 2.3 2.6 2.9
10. Cyclical external quality assurance of study programmes	2.9

COMPLIANCE OF THE EXTERNAL REVIEW OUTCOMES WITH THE STANDARDS

STANDARD 1. ACADEMIC PROGRAMME ALIGNMENT

Compliance with the standard: **full compliance**

Good practice

The intended learning outcomes of the programme are aligned with the European Qualification Framework, Dublin Descriptors, and the project of the National Qualification Framework, occupational standards, requirements of employers and professional associations.

The learning outcomes of the programme are aligned with the FSES competences. The course modules content and learning outcomes are coordinated, the education technologies have been specified; new assessment tools have been developed.

The procedure of learning outcomes assessment is regulated by the "Regulations on Students' Assessment and Progression Control for Higher Education Degree Programme's" (Rector's Order №462 of 27.05.2015). The Regulations stipulate the procedures of formative and summative assessment in a discipline/module in accordance with the required level of competences.

The Programme implements the student-centered approach. Students themselves choose the area of training, elective and optional courses. The study process is student-oriented, which helps to consider professional needs and interests of learners. Education technologies used in the programme include interactive lectures, discussions, case studies, projects, which help to form current general cultural, general occupational and subject specific competences of graduates.

Criterion 1. The academic programmes are properly titled and lead to awards at the appropriate level, consistent with European and national qualifications for higher educational qualifications and the Dublin Descriptors for Master's awards.

Compliance with the criterion: **full compliance**

The study programme is developed and designed to meet the appropriate European and national standards and requirements.

In order to reflect the correspondence of the programmes to the European and national frameworks for higher education qualifications, and the Dublin Descriptors a Matrix of alignment is being developed.

The profile of the Master programmes meets the requirements of Federal State Educational Standard. Upon completion the programme graduates are awarded the qualification of Master (Level 7 of EQF and draft of the NQF). The title of Programme 05.04.06 Ecology was changed in the course of TEMPUS ALIGN project in order to take into consideration the requirements for the quality of the programme delivery.

CRITERION 2. The academic programmes are informed by and consistent with occupational standards where appropriate.

Compliance with the criterion: **substantial compliance**

As there is no occupational standard for this programme, it was developed and updated in accordance with the qualifications requirements and the concept of engineering education CDIO.

CRITERION 3. The aims of the programmes are appropriate for the student intake, and can be realized through students' attainment of the programme/module learning outcomes.

Compliance with the criterion: **substantial compliance**

The learning outcomes are developed based on the needs of employers and the requirements of the Federal State Educational Standards. Each learning outcome is manifested in the learning modules.

The study programme developers analyze learning outcomes within each module. For this purpose a matrix of alignment of intended learning outcomes of a module and learning outcomes of the programme is built.

CRITERION 4. All learning outcomes at module level are at the appropriate level, and assessed through fair, valid and reliable student assignments/tests.

Compliance with the criterion: **full compliance**

The curriculum of the programme is designed on the accumulative principle and continuity of the module learning outcomes. For feasibility of assessment methods and technologies the matrixes of alignment of the programme learning outcomes with the levels of qualification frameworks, teaching methods, assessment technologies and learning modules were built.

All learning outcomes of the study modules are measurable. The procedures for resulting grades in the study modules are described in the Regulations on formative assessment and interim attestation of students in the programmes of HE.

Assessment criteria and procedures are developed for each study module depending on the selected teaching methods and are communicated to the students. The University has a uniform system of the assessment of achieved descriptors, which is aligned with the descriptors in the syllabi of disciplines/modules and is measured by a four-point grading scale.

Formative assessment methods approved by the curriculum (term paper, term project, essay, written test, etc.) are taken into consideration as a part of resulting grade in a discipline, module. The value of each element is determined in percentage.

The assessment criteria and procedures are annually reviewed.

CRITERION 5. Throughout their course of study, students are able to monitor their academic progress and development, and receive advice on how they can improve and enhance their work

Compliance with the criterion: **full compliance**

The information on academic issues is available to students in the electronic system of the educational process management "Tandem". The students have an opportunity to monitor their progress in this System throughout the course of studies. They can get tips on how to improve and intensify their work.

Students are provided with clear and current information about the learning opportunities and support available to them.

The service "Personal account of the student of NArFU" has been introduced in order to provide students with clear and current information about the learning opportunities and support available to them.

The personal account provides the students with the option of selecting:

University-wide elective courses aimed at developing generic competences and skills (options are available from a single University-wide pool of elective courses);

Elective courses aimed at developing subject-specific competences and skills (choices are provided according to the degree programme curriculum).

This allows for the automatic creation of individual study plans of students in the system of educational process management "Tandem. University" on the basis of the choice of various disciplines/modules.

Electronic teaching and learning package of the course/module contains mandatory and optional sets of documents and materials including: course/module descriptors, guidelines for different aspects of teaching and learning, samples of assessment materials.

All students of the NArFU have access to the catalog of electronic resources and teaching materials for their degree programmes.

CRITERION 6. The teaching and learning activities employed within the modules are informed by reflection on professional practices, and designed to enable students to develop the knowledge, skills, abilities and professional competencies that will enable them to achieve the modules' learning outcomes.

Compliance with the criterion: **full compliance**

In order to successfully acquire a discipline/module different means and teaching methods are used, which ensure the achievement of intended learning outcomes of the programme with the consideration of the amount of classes conducted in an interactive form. The minimum

number of classes in the interactive form is regulated by the relevant educational standard and is laid down in the syllabus.

The chosen teaching methods provide an opportunity for students to develop knowledge, skills and professional competences necessary for the attainment of the intended learning outcomes in a discipline/module.

Active and interactive teaching methods are used in different kinds and forms of educational activity (lectures, laboratory work, practical classes, research and project work). Research and practical projects, teaching and research practicum, field trips enhance students' knowledge and understanding in the fields of study as well as develop professional and transferable skills/generic competences (independent and critical thinking, self-management; collaborative and communication skills, etc.).

CRITERION 7. The structure of the programme ensures the progression of students' learning, and provides appropriate opportunities for student choice.

Compliance with the criterion: **full compliance**

The progression of students' learning is ensured through the careful selection of the programme modules and their content, and also through a combination of mandatory (federal part of the curricula), optional (variable part of the curricula determined by the university/department), and elective modules in the programmes' structure.

CRITERION 8. The credits ratings (national and ECTS) for modules are properly aligned with the designated student workloads for the modules

Compliance with the criterion: **substantial compliance**

The University study programmes are developed in accordance with the FSES for HE and the adopted local institutional document "Requirements to the Reengineering of Degree Programmes Curricula" (Order № 159 of 19.02.2015).. According to the national regulations the total workload of the academic year makes up 60 credits except for the programmes delivered according to an individual plan.

The structure of the SP includes a mandatory (basic part of the curricula) and a variable part. The variable part provides for the delivery of the programme's profile part. A study programme consists of three sections: «Disciplines (modules)», «Practicum, work placement», «State final attestation».

According to the national regulations the total workload of the academic year makes 60 credits (30 credits per semester). The total workload of one credit makes 36 academic hours including directed and self-directed hours and assessment.

The students' self-study work load includes:

- Independent work to get ready for classes (not less than 50% of the total independent work load);
- Independent work to get ready for a pass/fail type exam (10 hours);
- Independent work to get ready for an examination (depending on the duration and workload of an examination period);
- Independent work to get ready for formative assessment tests.

The work load in order to get ready for formative assessment in a module/discipline is calculated as follows: a written test (10 hours), essay (10), a design project (20 hours), term paper (30 hours), term project (40 hours).

CRITERION 9. Students are provided with clear and current information about the learning opportunities and support available to them

Compliance with the criterion: **full compliance**

Students are provided with clear and current information about the learning opportunities and support available to them.

The service "Personal account of the student of NArFU" has been introduced in order to provide students with clear and current information about the learning opportunities and support available to them.

The service is posted on the Sakai platform and gets relevant information from the system of educational process management on the basis of "Tandem. University".

In the personal account students have the opportunity to receive the information on the following: academic performance; degree programme curriculum with the list of courses/modules; university orders related to the student personally or the teaching process in general; selected profile.

The personal account provides the students with the option of selecting:

University-wide elective courses aimed at developing generic competences and skills (options are available from a single University-wide pool of elective courses);

Elective courses aimed at developing subject-specific competences and skills (choices are provided according to the degree programme curriculum).

This allows for the automatic creation of individual study plans of students in the system of educational process management "Tandem. University" on the basis of the choice of various disciplines/modules.

Electronic teaching and learning package of the course/module contains mandatory and optional sets of documents and materials including is developed on the basis of educational platform Sakai.

CRITERION 10. The design, delivery and monitoring of the academic programmes is 'student centred', engaging students collectively and individually as partners in the development, assurance and enhancement of their educational experiences

Compliance with the criterion: **substantial compliance**

Students are involved in all the processes of the study programme life cycle: design, developing, implementation and satisfaction monitoring. The students are members of different selected governing bodies. They participate in the University Academic Council and in the commission on the quality of education, the University trade union, and take part in satisfaction surveys.

STANDARD 1. AREAS FOR IMPROVEMENT

1. In order for the programme to meet the requirements of the modern labour market it is necessary to align it with the occupational standard for an Ecologist (after its publication).
2. The interaction with employers should be improved; they should be more actively involved in joint work in all stages of the programme cycle: designing, developing, delivery and supervision of work placement, etc.
3. The programme is delivered in English, thus, it may be attractive to foreign students. However, the proportion of foreign students is insignificant. It is necessary to enhance the work on the promotion of the programme on the educational service market in Europe and in the rest of the world. This will launch the programme to the international level.
4. There are problems in providing academic mobility (inbound and outbound), which could be resolved after the signing of an agreement on a joint degree programme with a partner University. The cooperation with partner universities should be enhanced.
5. It is necessary to improve the system for network and distance learning Sakai.
6. It is recommended to introduce additional foreign language courses in English and other languages relevant for the Arctic region.

STANDARD 2. ALIGNMENT OF QUALITY ASSURANCE PROCESSES

Compliance with the standard: **full compliance**

Good practice

The policy of quality assurance in education at NARFU is aimed at the implementation of NARFU Development Programme for 2010-2020. The programme was developed by working groups consisting of teachers and leading stakeholders of the University. NARFU has in place the Policy in the sphere of quality of education and a chart of the system of education quality.

In 2014 the University management system was successfully certified for compliance with the EFQM Model and achieved "5 Star Recognized for Excellence" certificate.

In the international ranking of universities ARES (Academic Ranking of World Universities-European Standard ARES-2016) in 2015 and 2016 NARFU holds the position in the category "Good quality performance".

NARFU's normative and methodological documentation is developed in compliance with the Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG-ENQA).

The internal quality system is regulated by the local documents and aligned with the programme's life cycle (designing, implementation, evaluation) and is based on the main principles of the Bologna process).

The Dublin descriptors are used for assessing learning outcomes.

The external quality assurance system includes quality review by external stakeholders. Except standard procedures (state, public, professional, etc.) there is evaluation of the programmes through stakeholder monitoring.

The University developed and adopted "Regulations on Launching New Degree Programmes (Bachelor, Specialist and Master) in NARFU", which regulate the processes of designing and approving study programmes; distribute responsibilities and rights of the University staff and stakeholders at the stage of developing and approving study programmes.

All the programmes meet the set goals. The intended learning outcomes of the programme are aligned with the European Qualification Framework, Dublin Descriptors, and the project of the National Qualification Framework, occupational standards, requirements of employers and professional associations.

The procedures for programme developing include benchmarking, SWAT-analysis and evaluation. Graduates and employers are involved at all stages of the programme's life cycle.

The University implements the student-centered approach. Students themselves choose the area of training, elective and optional courses. The study process is student-oriented, which helps to consider

professional needs and interests of learners. Education technologies used in the programme include interactive lectures, discussions, case studies, projects, which help to form current general cultural, general occupational and subject specific competences of graduates.

The assessment procedure of learning outcomes of a discipline/module is formed with the consideration of the triad «learning outcomes – teaching methods and technologies – assessment of learning outcomes». The procedure of learning outcomes assessment is regulated by the "Regulations on Students' Assessment and Progression Control for Higher Education Degree Programme's". The Regulations stipulate the procedures of formative and summative assessment in a discipline/module in accordance with the required level of competences.

The procedure of the compliance of student learning outcomes with the corresponding requirements of the educational standard is regulated by the "Regulations on the Procedure of the State Final Attestation".

In the framework of academic mobility individual plans are developed and learning outcomes are transferred according to local regulations.

NArFu assures the availability of adequate and sufficient resources. All educational modules are provided with accessible resources available at the Sakai electronic platform. Every student has a personal account.

The University has in place an Intellectual Centre which includes a scientific library with printed and electronic resources. The students have access to NArFU's electronic libraries.

The University conducts a periodic monitoring and evaluation of the programmes with a view of their quality assurance and satisfying the needs of students and society. The general requirements for organization and order of stakeholder monitoring are set out in "Regulations on the monitoring of stakeholders' satisfaction with quality of educational process at NArFU". The feedback from internal and external stakeholders is received with the help of information platform LimeSurvey.

The monitoring of internal stakeholders includes:

- Monitoring of student satisfaction with the quality of education in the programme;
- Monitoring of the teaching staff satisfaction with the quality of the study process organization.

The monitoring of external stakeholders includes:

- Monitoring of work placement supervisors with the quality of students' training;
- Monitoring of employers' satisfaction with the quality of students' training;
- Monitoring of graduates with the quality of education and training.

CRITERION 1. There are clear criteria against which academic programmes are assessed in the programme approval, monitoring and review process.

Compliance with the criterion: **full compliance**

The study programmes are developed in accordance with the requirements of the FSES and occupational standards/qualification requirements of the corresponding fields of training (Regulations on Launching (developing) New Degree Programmes in NARFU, Order № 196 of 07.03.2014 №196 and Regulations on the Implementation of Optional and Elective courses/modules, Order №854 of 17.09.2013).

When developing a study programme the requirements of national/international qualification framework and requirements of occupational standards and(or) professional associations are taken into account. The requirements of occupational standards, opinions of external experts are considered at all stages of a study programme life cycle and are regulated by the Guidelines of the Ministry of Education and Science of the Russian Federation.

CRITERION 2. The roles and responsibilities for programme design, development, approval and monitoring are clearly articulated.

Compliance with the criterion: **full compliance**

The processes of the design, approval, delivery, monitoring, and support and development of the University academic programmes are regulated by a number of institutional documents which were developed in keeping with the national standards and in view of the alignment with international requirements. All the documents are posted on the University website.

The roles and responsibilities for programme design, development, approval and monitoring, as well as the criteria against which academic programmes are assessed at these stages, are described in the document "Regulations on Launching (developing) New Degree Programmes in NARFU".

The bodies responsible for the direction, implementation, and review of the quality systems and initiatives within the University are the following: the Academic Council of NARFU, the University Education Board of NARFU, the Student Council of NARFU, the Department of Academic Development, the section of the Quality of Education

The Academic Council of NARFU is the body which has overall responsibility for the direction, implementation, and review of the quality systems and initiatives within the University. The Academic council works to enhance the learning, teaching and assessment experience in NARFU. This work is driven through 7 sub committees of the Academic Council. The University Education Board is another corporate body which regularly deals with the issues of quality assurance with reference to the delivery

of degree programmes. Most of the quality assurance issues are first considered by the University Education Board, and afterwards in case of approval they are included into the agenda of the University Academic Council. The work of the University Education Board is also driven through 5 sub committees.

In the University there is also a special administrative unit with the mandate of monitoring and maintaining the quality of content and delivery of academic programmes, from an overall University perspective. It is the section of the Quality of Education in the Department of Academic Development. The main function of this section is academic quality control.

NARFU strives to ensure that both the operation and control of its quality assurance processes are effective and that they contribute to an on-going process of continuous improvement.

CRITERION 3. Students are involved in programme design and in the processes of programme development, approval, monitoring and review

Compliance with the criterion: **substantial compliance**

Students are involved in all the processes of the study programme life cycle: design, developing, implementation and satisfaction monitoring. The students are members of different selected governing bodies. They participate in the University Academic Council and in the commission on the quality of education, the University trade union, and take part in satisfaction surveys.

CRITERION 4. There are effective policies which ensure that the academic standards for credit and awards are rigorously maintained at the appropriate level, and that student performance is judged against these standards.

Compliance with the criterion: **full compliance**

There are local normative documents regulating the processes of students' progression in accordance with academic standards and qualification framework: Regulations on the Formation of the Stock of Assessment materials for Higher Education Degree Programmes; Regulations of Students Assessment and Progression Control for Higher Education Degree Programmes; Regulations on the Procedure of State Final Attestation of students in Bachelor, Specialist and Master Degree Programmes, which ensure that academic standards for awarding ECTS and degrees are observed.

CRITERION 5. There are clear and effective policies and processes for assessing the recognition of prior learning and supporting student mobility between courses of study and institutions.

Compliance with the criterion: **full compliance**

The University has in place clearly defined processes and procedures for the recognition of prior learning and support of the student mobility within the University and between HEIs (to include HEIs from abroad): Regulations on Credit Transfer for Higher Education Degree Programmes, approved by Rector's Order №942, dd. 12.11.2015, Regulations on teaching and learning on the basis of the individual study plan for bachelor, specialist and master degree programmes, approved by Rector's Order №943, dd. 12.11.2015. Regulations on international academic mobility.

The University is actively developing network interaction with partner HEIs and is implementing 7 programmes together with 5 partner Federal Universities (BFU, NEFU, NCFU, SFU, URFU) and 15 practice-oriented programmes with HEI-members of the Supercomputing Consortium of Russian Universities.

NArFU is implementing 6 international programmes jointly with partner Universities: Lapland University of Applied Sciences (Finland), University of Tromsø, (Norway), Nord University (Norway), the Centre for Telemedicine NST Norway), the University of Upper Alsace (France).

CRITERION 6. Knowledge of professional standards/requirements and external expertise (e.g., from subject experts, employers and professional associations) is used to inform the design, development, approval and monitoring of academic programmes.

Compliance with the criterion: **full compliance**

When developing programmes the requirements of National/International Qualification Framework and occupational standards are taken into consideration. The occupational standards, opinions of external experts are considered at all stages of the programme life cycle. The stages of a programme development with the consideration of occupational standards include: analysis of general job functions and labour actions; making the list of competences to be developed throughout the programme in addition to the competences of the FSES-HE; developing modules' learning outcomes and content with reference to corresponding job functions; developing assessment materials to evaluate and assess attainment of these competences; developing the curriculum and the time schedule; expertise of the study programme.

CRITERION 7. There are appropriate arrangements to train and support academic and professional/administrative staff, who are involved in the design, delivery, approval and monitoring of academic programmes.

Compliance with the criterion: **full compliance**

There is a structural subdivision in the University – the Centre for Developing Professional Competences. The Center offers programmes of further education and in-service training for the staff, researchers, administrative and support personnel of NARFU and other organizations in the following forms:

Programmes of further education of different length conducted at the University or its branches;

- Courses of further education, pedagogical and research internships (for managerial personnel) in other HEIs, research centres, and special organizations, including those from abroad.
- Professional development of the teaching and research staff of the University is regulated by the Rules for professional development of the teaching and research staff of NARFU, approved by Order N^o 1121 of 25 December 2015.

All NARFu employees can rely on constant social support: trade union, free training workshops and individual consultations, psychological counseling on a range of issues, kinder garden, health and recreation centre.

CRITERION 8. There are clear policies and processes in place to ensure the integrity of student assessment (e.g., through marking schemes, moderation processes, examination board regulations), and the effectiveness of these policies is regularly reviewed.

Compliance with the criterion: **full compliance**

All intended learning outcomes for the programme modules are measurable. Assessment of students' progression is subject to the University Regulations of Students Assessment and Progression Control for Higher Education Degree Programmes (Rector's order N^o 462, dd. 27.05.2015). This document regulates and defines the procedures of formative and summative assessment, recommended assessment methods, reassessment opportunities with certain restrictions, support to students with special needs in the process of assessment, roles and responsibilities in the organization of assessment.

The types of formative assessment adopted by the curriculum (term paper, term project, essay, written test, etc.) are considered as part of the resulting grade in a discipline/module. The criteria and procedures of assessment are annually reviewed.

CRITERION 9. The policies and processes of programme design, development, approval and monitoring are regularly reviewed in order to ensure the effectiveness and continuous enhancement of current practices.

Compliance with the criterion: **full compliance**

– The life cycle of the University degree programmes includes the stages of design and approval, implementation/delivery, monitoring and evaluation followed by programme improvement. Quality assurance in the programme life cycle is represented in the two-contour model, which shows the relationship between institutional processes of programme quality assurance and the external environment.

– The outer contour shows the process of setting, evaluating and correcting the aim and mission of a degree programme.

– The inner (institutional) contour demonstrates how the programme learning outcomes are consistently planned, achieved and assessed in the university.

Quality assurance procedures of the University degree programme include two modes:

– External evaluation (state accreditation 2014); professional public accreditation including international experts – since 2011: 86 study programmes; certification of the University management system – 2014; monitoring of external stakeholders' satisfaction; participation in the Federal Internet Examination; participation in the international ranking of universities ARES;

Internal evaluation (self-evaluation of a study programme, internal audits of the quality of programme implementation and acquisition, internal stakeholder monitoring). Internal quality audits are procedures which evaluate how different elements of a programme correlate with the quality standards adopted by the University. The objects of such audits are different: updating course syllabi; organization of work placement; quality of assessment materials, etc. Besides, internal quality assurance procedures include regular reviews of curricula based on the analysis of satisfaction surveys of internal stakeholders (students, teaching, research and administrative staff).

NARFU students participate in the Open NARFU International Student Internet Olympiads in Mathematics, Theoretical Mechanics, Chemistry, Economics, Information Technologies, Physics, History and Russian. They also take part in internet exams in the framework of the innovation project «The Federal Internet Examination in the Sphere of Professional Education: Competency-based and Traditional Approach».

NARFU conducts regular satisfaction surveys of external stakeholders (employers, work placement supervisors, graduates) on the quality of education and training of students and graduates.

On the basis of the above mentioned procedures the study programmes are reviewed and updated.

CRITERION 10. There are effective policies in place to ensure that staff appointed to teach and support student learning on academic programmes are appropriately qualified, and that delivery of the programmes is supported by the appropriate learning resources.

Compliance with the criterion: **full compliance**

NArFU has in place an incentive system for the teaching and research staff – an effective contract. In order to achieve the key strategic goals of the University development and for financial incentives of the labour quality there are incentive rewards from the University rewards foundation in accordance with the individual ranking of an employee.

In the system of training and attestation of the NArFU staff the key role is played by the target programmes «Candidate of Science», «Doctor of Science». Regulations and lists of participants of the target programmes and other information are placed on the NArFU website in the section «Science».

The strategic goal of the programme is to raise the proportion of highly qualified specialists in the HEI. The University administration ensures creating optimal conditions for research (optimal work load, financial incentives, staff mobility programmes, reimbursement of publication fees, financial aid).

The University ensures that highly qualified specialist is recruited (Regulations on Recruiting Highly-Qualified Specialists for Working in the University. Order №525 of 19.06.2012).

In accordance with the FSES the students are provided with access to electronic library systems and to the electronic information and education environment of the University. The programmes are supplied with text books and teaching and learning materials necessary for the successful implementation of the programmes. There are facilities for conducting all kinds of classes: lectures, seminars, term projects, consultations, formative and summative assessment and also rooms for self-directed work and storage and maintenance rooms.

STANDARD 2. AREAS FOR IMPROVEMENT

1. It is necessary to continue the work on involving employers in designing and implementation of the programme as well as in education quality evaluation.
2. The work on aligning learning outcomes assessment technologies with education technologies in disciplines/modules should be continued.
3. It is recommended to continue the work on the development of electronic resources for the programme module in order to provide opportunities for distant learning during mobility periods.
4. It is necessary to replenish library resources, especially in the English language.
5. It is recommended to improve engagement with employers and employer association and to involve them as experts in evaluation procedures, and conducting seminars and workshops.
6. The academic mobility of the teaching staff and administrative personnel should be enhanced.
7. Students should be more actively involved in working groups on developing materials and documents of the study programme.

CONCLUSION OF THE EXTERNAL REVIEW PANEL

Standard	Criterion	Compliance with the criterion	Compliance with the standard
Standard 1	1.1	full	full
	1.2	substantial	
	1.3	substantial	
	1.4	full	
	1.5	full	
	1.6	full	
	1.7	full	
	1.8	substantial	
	1.9	full	
	1.10	substantial	
Standard 2	2.1	full	full
	2.2	full	
	2.3	substantial	
	2.4	full	
	2.5	full	
	2.6	full	
	2.7	full	
	2.8	full	
	2.9	full	
	2.10	full	

The External Evaluation Panel recommends that the National Accreditation Board **accredit the Master’s degree study programme 05.04.06 Ecology "Environmental Risk Management in the Arctic» delivered by the Northern (Arctic) Federal University for the period of 6 years.**

PROGRAMME OF SITE VISIT OF THE PEER-REVIEW PANEL

Time	Activity	Place
26th of June, Sunday		
During the day	Arrival of peer-review panel members and observers to Arkhangelsk	
27th of June, Monday		
08.45	Transfer to the Northern (Arctic) Federal University from Pur-Navolok Hotel	
<i>Coffee/tea will be available throughout the peer-review panel</i>		
09.10 – 11.00	Private meeting of the panel	(room 1320, NArFU main building).
11.00 – 12.00	Meeting with Align Project Leaders at NArFU	(room 1321, NArFU main building)
12.00 – 13.00	Lunch	
13.00 – 16.00	Meeting with NArFU representatives responsible for the AP	(room 1321)
16.15 – 19.15	Meeting with NArFU representatives responsible for the AP	(room 1321, NArFU main building)
20.00	Dinner	
28th of June, Tuesday		
08.45	Transfer to the Northern (Arctic) Federal University from Pur-Navolok Hotel	
09.00 – 10.00	Meeting with students and graduates of the AP	(room 1321, NArFU main building)
10.00 – 11.00	Private meeting of the panel	(room 1320, NArFU main building).
11.00 – 12.00	Closing meeting on the Align Project results	(room 1321, NArFU main building)
12.00 – 13.00	Work with check-lists	(room 1320, NArFU main building)
13.00 –	Lunch and social mingle in Malye Karely Open Air Museum	
29th -30th of June: Departure of peer-review panel experts		