



Национальный исследовательский
Мордовский государственный университет
имени Н. П. Огарёва




National Centre for
Public Accreditation

SUMMARY REPORT

on international public accreditation of the cluster of
educational programmes in

«Biotechnology» (19.03.01, 19.04.01)

delivered by National Research Ogarev Mordovia State
University



2020

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 «Biotechnology» (19.03.01, 19.04.01) delivered by National Research Ogarev Mordovia State University.

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	<i>Federal State Budgetary Educational Institution of Higher Education «National Research Ogarev Mordovia State University»</i>
Founders	<i>Ministry of Science and Higher Education of the Russian Federation</i>
Year of foundation	<i>1931 — Mordovia State Pedagogical Institute 1957 — Mordovia State University 1970 — Ogarev Mordovia State University 2010 — National Research Ogarev Mordovia State University 2016 — Federal State Budgetary Educational Institution of Higher Education «National Research Ogarev Mordovia State University»</i>
Address	<i>68, Bolshevistskaia Str., Saransk, Republic of Mordovia, 430005</i>
Rector	<i>Sergei Vdovin, Candidate of Economics, Associate Professor</i>
License	<i>Series 90J01 N°9255 reg. N° 2218 of 24.06.2016 permanent</i>
State accreditation	<i>Certificate of State Accreditation Series 90A01 N° 3285, reg. N°3125 of 22.05.2019 valid till 22.05.2025</i>
Number of students	<i>17257 of whom: 12689 are full-time students 373 are part-time students 4195 study in absentia</i>

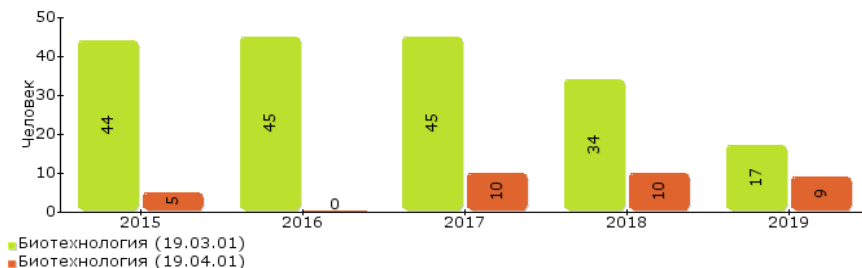
INFORMATION ON THE STUDY PROGRAMMES UNDERGOING ACCREDITATION

Educational programmes	<i>«Biotechnology» (19.03.01), «Biotechnology» (19.04.01)</i>
Level of training / Standard period of training	<i>Bachelor's Degree Programme / 4 years Master's Degree Programme / 2 years</i>
Structural subdivision (Head)	<i>Faculty of Biotechnology and Biology (Viktor Revin, Doctor of Biology, Professor)</i>
Graduate departments (and their respective heads)	<i>Department of Biotechnology, Bioengineering and Biochemistry (Viktor Revin, Doctor of Biology, Professor)</i>
Dates of Review	<i>December 17-19, 2019</i>
Person responsible for accreditation from the HEI	<i>Olga Antipova, engineer of the Department of Quality Management Viktor Revin, Doctor of Biology, Professor, Dean of the Faculty of Biotechnology and Biology, Head of the Department of Biotechnology, Bioengineering and Biochemistry</i>

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

Indicators	2020
Cluster of educational programmes in «Biotechnology» (19.03.01, 19.04.01)	
Number of the given programmes in the RF	111
Number of higher educational institutions to offer the given programmes	62
Number of programmes – winners of the project (% from total number of these programmes offered in the RF)	31 (28%)
Republic of Mordovia	
Number of the given programmes offered in the region	2
Number of programmes – winners of the project (% from total number of these programmes offered in the region)	2 (100%)
Number of higher educational institutions and branches in the region	5
Total number of programmes offered in the region	229
Total number of programmes – winners of the project (% from total number of these programmes offered in the region)	38 (16,6%)

REFERENCE DATA ON STUDENT ENROLLMENT FOR PROGRAMME



ACHIEVEMENTS OF THE STUDY PROGRAMMES

Quality of implementing the study programmes

In January 2019 the experts of the Certification Association «Russian Register – Baltic Inspection» conducted the external audit during recertification of the quality management system at the University for compliance with the requirements of a new international standard ISO 9001:2015 and GOST R ISO 9001-2015.

In 2019 the University successfully passed the procedure of state accreditation and confirmed the status of a multidisciplinary classical university.

In 2013 the educational programme in «Biotechnology» successfully passed public accreditation of the Agency for Quality Assurance in Higher Education and Career Development.

The educational programme in «Biotechnology» is among the best programmes in the project «The Best Study Programmes of Innovative Russia».

Provision of up-to-date education

The up-to-date content of education is ensured by regular review of the educational programmes; introduction of the research outcomes of teachers in the educational process with the use of modern research equipment.

The programmes under review are provided with a wide range of facilities for work placement in the region. Part of graduation and course works are made at the request of enterprises of on their basis.

Teaching staff

A highly professional teaching staff works at the Department of Biotechnology, Bioengineering and Biochemistry: 3 Doctors of Sciences, 15 Candidates of Sciences, 4 researchers (they are not teachers) working on a regular basis in 2014-2019 and conducting contract-based research.

As of September 1, 2019, the academic degree holders' rate is 85%.

Personnel training is carried out with the help of postgraduate studies and competition. 4 people defended theses for a Candidate's degree in 2014-2019.

Independent assessment of student learning outcomes

Since 2013 the University regularly participates in the project «Federal Internet Exam in Higher Education».

Educational resources

The classrooms are equipped in compliance with the modern requirements and allow for conducting all kinds of training and practical, laboratory and research work.

The library stock is more than 2,5 million units (books and journals) in the Russian, Mordovian and foreign languages. Library resources are

renewed every month; the information on new acquisitions are published on the website of the research library.

Automatization of library technologies is carried out on the basis of the library management systems MARC-SQL1.10 and «MegaPro» and the app «MegaWeb». The library has electronic coursebooks and study guides on the disciplines of the educational programmes.

The library provides an access to databases of international science citation index, databases of foreign research periodicals, Russian informational resources, electronic library systems: «Lan», «Znaniy.com», «Konsultant Studenta», «Urait», «Rukont».

Research activity

The Department of Biotechnology, Bioengineering and Biochemistry is involved in carrying out the programme of the University strategic development; over the years it is one of the leading Departments of the educational institution.

In 2014-2019 the work on 12 grants has been carried out and contract-based research for a total amount of more than 80 million rubles has been conducted. During that period more than 100 research works were published, and more than 40 of them were published in the journals of Web of Science and Scopus.

17 process patents were received. 5 monographs were published.

Academic mobility of students

Regular work on involvement of the students in research is carried out. The students actively participate in national and international conferences.

Employability of graduates

Generally, the graduates successfully find jobs confirming training quality and professional competency. The area of graduates' work includes the spheres of education, science and production (positions of engineers and technologists).

The graduates work in research institutions and centres and as biotechnology engineers at processing enterprises of the Republic of Mordovia and other regions (PJSC «Biokhimik», Dairy Plant «Saranskii», PJSC «Bisintez», PJSC «Khlebozavod», PJSC «MordovAlkoProm», PJSC «SanInBev», farm firm «Oktiabrskaya», agricultural holding «Talina», meat-processing factory «Cherkizovskii», meat-processing factory «Mikoyanovskii», etc.).

In 2014-2019 the graduates' employability rate increased from 75 to 91%.

International projects

The teachers are members of the international research communities: executive committee of the European Biotechnology Thematic Network Association (EBTNA), Royal Society of Biology of the United Kingdom.

The important part of the Department's development is international links with leading foreign HEIs on the basis of agreements and contracts on cooperation with universities from the United Kingdom, Turkey, Azerbaijan, and Serbia.

The educational institution together with Bartın University (Turkey) carried out the grant project as part of the federal targeted programme «Research and developments in the priority areas of development of the science and technology complex of Russia for 2007-2013». The overall funding is 5 million rubles of budget funds and 5 million rubles from the funds of the foreign partner.

Since January 01, 2020 the work on the grant of the Russian Foundation for Basic Research together with BRICS and partners from the People's Republic of China (Huazhong University of Science and Technology) and India (Mahatma Gandhi University) on the topic "Development of functional materials of a new generation on the basis of hydrogels, aerogels and film forms of bacterial cellulose possessing antibacterial, regenerative and hemostatic properties".

EXTERNAL REVIEW PANEL



Axel Blokesch (Frankfurt, Germany)

Review Chair, foreign expert

Dr., Professor, Department of Biotechnology, Faculty of Computer Science and Engineering, Frankfurt University of Applied Sciences, member of the German Federation for Protection of Environment and Nature (BUND) and the German Chemical Society (GDCh)

A nominee of the Accreditation agency EVALAG, Germany



Olga Larionova (Saratov, Russia)

Deputy Review Chair, Russian expert

Doctor of Biology, Associate Professor, Head of the Department of Microbiology, Biotechnology and Chemistry, Vavilov Saratov State Agrarian University, member of the Interregional Russian Microbiological Society, expert of the Skolkovo Foundation in the field «Biotechnologies in Agriculture and Industrial Biotechnology», Chair of the Expert Committee of semifinal sessions of the Foundation for Assistance to Small Innovative Enterprises in Science and Technology U.M.N.I.K, member of the expert committee for the Rector's grant of Vavilov Saratov State Agrarian University

A nominee of the Guild of Experts in Higher Education



Evgenia Sorokataia (Krasnoirsark, Russia)

Panel member, Russian expert

Candidate of Biology, Associate Professor, Vice-Rector for Academic Affairs, Krasnoyarsk State Agrarian University, member of the Guild of Experts in Higher Education, member of the Russian non-governmental organization «Ovchinnikov Society of Russian Biotechnologists»

A nominee of the Guild of Experts in Higher Education



Tatiana Veretekhina (Saransk, Russia)

Panel member, representative of professional community

Chief Technologist, LLC Saranskiy Distillery

A nominee of LLC Saranskiy Distillery



Olga Kurochkina (Saransk, Russia)

Panel member, representative of students

5th year student, Evseviev Mordovia State Pedagogical Institute

A nominee of Evseviev Mordovia State Pedagogical Institute

INFORMATION ON THE LEADING TEACHERS OF THE EDUCATIONAL PROGRAMMES

Viktor Revin

Doctor of Biology, Professor, Dean of the Faculty of Biotechnology and Biology, Head of the Department of Biotechnology, Bioengineering and Biochemistry, member of the Royal Society of Biology of the United Kingdom, member of the executive committee of the European Biotechnology Thematic Network Association (EBTNA), member of the Presidium of Federal Educational and Methodological Association for Biological and Biotechnological Education, member of the Research and Technology Board under the government of the Republic of Mordovia, Head of the Mordovia regional branch of the Russian Society of Biotechnologists, member of the Interregional Russian Microbiological Society, advisor of the Russian Academy of Architecture and Construction Sciences, holder of the award of the Head of the Mordovia Republic

Natalia Gromova

Candidate of Biology, Associate Professor, Department of Biotechnology, Bioengineering and Biochemistry

Arkadii Deviatkin

Candidate of Biology, Associate Professor, Department of Biotechnology, Bioengineering and Biochemistry, member of the Russian Society of Biotechnologists

Svetlana Ibragimova

Candidate of Biology, Associate Professor, Department of Biotechnology, Bioengineering and Biochemistry, member of the European Biotechnology Thematic Network Association (EBTNA), member of the Russian Society of Biotechnologists, member of the Interregional Russian Microbiological Society

Davud Ali-Ogly Kadimaliev

Doctor of Biology, Professor, Department of Biotechnology, Bioengineering and Biochemistry, Director General of LLC Biopolimer (Skolkovo resident since 2018), member of the Russian Society of Biotechnologists, winner of the Russian competition «Ingenger goda 2007» (Engineer of the Year)

Elena Liaskina

Candidate of Biology, Associate Professor, Department of Biotechnology, Bioengineering and Biochemistry, member of the European Biotechnology Thematic Network Association (EBTNA), member of the Russian Society of Biotechnologists, member of the Interregional Russian Microbiological Society

Nikolai Pestov

Candidate of Biology, Associate Professor, Department of Biotechnology, Bioengineering and Biochemistry, member of the Russian Society of Biotechnologists, member of the Interregional Russian Microbiological Society

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: **full compliance**

Good practice:

The Department of Education Quality Management works at Mordovia State University.

The University has a transparent system of monitoring of the results of subdivisions' activities: staff, educational activities, research, international activities, financial and economic activities.

The policy of the quality assurance system is published on the website, including the English version.

The analysis of the market requirements is conducted in order to train specialists in demand, in particular, meetings of the Dean with employers are held.

Areas for improvement:

The University should enhance cooperation with the regional subject-specific ministries and institutions.

STANDARD 2. Design and approval of programmes

Compliance with the standard: **full compliance**

Good practice:

The University develops own educational standards; takes into account the requirements of the professional standard in training of highly-qualified experts.

The University has a wide range of work placement facilities in the region.

The students and graduates are highly motivated; the employability rate is high.

Areas for improvement:

The University should introduce two new courses in the Bachelor programme: the legal framework of biotechnological processes; a course on standardization and certification (QMS).

STANDARD 3. Student-centred learning and assessment

Compliance with the standard: **full compliance**

Good practice:

The information on evaluation procedures and students' academic progress is available in the electronic informational and educational environment.

The educational programme 19.03.01 Biotechnology is among the 'Best Educational Programmes of Innovative Russia'.

The students are involved in independent evaluation of learning outcomes.

The scientific achievements are effectively used in the educational process. Most students carry out research and grant activities starting from their second year of Bachelor study.

Areas for improvement:

Individual learning paths should be made available for talented students in order to allow them to effectively learn the educational programme, do research and work.

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

Compliance with the standard: **full compliance**

Good practice:

The University carries out the career-guidance work: holds workshops, uses social media, holds the University Olympiad on Biology, School of a Young Biologist, open lectures for school students, different events oriented at attracting applicants from other regions and countries.

High percentage of students doing research, participating in grant competitions, conferences, other competitions and participating as inventors in granted patents.

The University carries out regular work on support of students' academic mobility.

The students participate in different Olympiads and competitions, and are winners of national conferences.

Areas for improvement:

The student mobility should be enhanced; the conditions for improving their language proficiency in English should be improved.

The possibility of learning other foreign languages – like currently German - should be provided in order to improve competitiveness of the graduates on the labour market.

STANDARD 5. Teaching staff

Compliance with the standard: **full compliance**

Good practice:

The Faculty has a leading position in research activities at the University: the work on 12 grants has been carried out and contract-based research for a total amount of more than 80 million rubles has been conducted; 17 process patents were granted.

The staff of the Department of Biotechnology, Bioengineering and Biochemistry are Skolkovo residents, members of the national and international research organizations: Russian Society of Biotechnologists, Educational and Methodological Association for Biological and Biotechnological Education, European Biotechnology Thematic Network Association (EBTNA), Interregional Society of Microbiologists.

High professional levels (the academic degree holders rate is 85%) and the levels of publication activities of the teaching staff. Research achievements are used in the educational process.

The coursebook «Obschaia Biotekhnologiiia» (General Biotechnology), 2nd edition, received the diploma at the VII Russian competition of the publications for HEIs «Universitetskaia Kniga – 2015» in the nomination «The Best Publication in Natural Sciences».

The study guide «Biotekhnologiiia Bakterialnykh Ekzopolisakharidov» (Biotechnology of Bacterial Exopolysaccharides) became the winner of the VII Privolzhskii competition of the publications for HEIs «Universitetskaia Kniga – 2019» in the nomination «The Best Study Guide in Medical Sciences».

Areas for improvement:

The teachers should have more possibilities of participating in the programmes of professional development and professional retraining in other Russian regions and in foreign countries.

The Thesis Board in the specialty 03.01.06 Biotechnology, including Nanobiotechnologies should be established.

STANDARD 6. Learning resources and student support

Compliance with the standard: **full compliance**

Good practice:

The material and technical resources are of high level and correspond to the world standards. The Faculty comprises 4 departments, Biostation, Botanic garden, Museum of Biology, the Centre of Biotechnology, 2 research and educational centres «Nanobiotechnologies» and «DNA-diagnostics and Genome Research», which work on its basis, 2 small innovative enterprises (LLC Biozaschita and LLC Genologia-MSU) for commercialization of the developments in the sphere of research and development.

The University has a long-term plan on improvement of material and technical resources.

The library stock is more than 2.5 million units (books and journals) in Russian, Mordovian and foreign languages. There is an access to 62 databases: 18 Russian and 42 international (SCOPUS, Web of Science, Nature, Springer, Cambridge University, Elsevier-Sciencedirect, Wiley, Oxford University, etc.).

The system of e-learning Moodle is used at the University.

The results of research (developments) are used in production.

Areas for improvement:

The public should be informed about the academic mobility programmes and its support system with the help of various methods.

The teachers should develop electronic educational resources and own websites.

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

Compliance with the standard: **full compliance**

Good practice:

The electronic informational environment functions at the University. It contains the information related to all University activities.

The management of the educational process is carried out with the help of the system «1C: University».

The Moodle platform allows for cooperation of all participants of the educational process.

Areas for improvement:

The possibilities of taking into account statistical data on the use of informational resources in the form of online courses should be enhanced.

STANDARD 8. Public information

Compliance with the standard: **full compliance**

Good practice:

The official website reflects all University activities and helps to get trustworthy and objective information in an effective way.

The University actively cooperates with regional subject-specific enterprises. The University signed more than 20 agreements with schools, secondary vocational institutions, regional enterprises, more than 10 agreements with HEIs and institutions, and 1 agreement with a large corporation (State Research Institute of Biosynthesis of Albuminous Substances).

In 2019 a BRICS grant was awarded together with Chinese and Indian partners.

More than 70% of the teachers are members of Russian and international research organizations.

The Centre for Support of Graduates Employability works at the University.

Areas for improvement:

The students should be informed about remarkable students, graduates and teachers of the Faculty and the University through the website and information stands as a way of promoting the educational programmes.

The University should address a proposal to employers on establishing corporate classrooms taking into account last achievements in biotechnologies (a specialised equipped classroom at the expenses of employers) with a possibility of using it in the educational process and for research activities.

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

Compliance with the standard: **full compliance**

Good practice:

The University has the regulated procedures of monitoring, periodical evaluation and review of the educational programmes.

The surveys of students and employers, interviews and questionnaires are conducted, discussed and result in taking corrective actions.

Areas for improvement:

Employers should more directly be involved in adjustment of the content of the educational programmes.

The employers should be involved on a trial basis in evaluation of the results of interim attestation on the disciplines that include professional competences. Currently they are only involved in the final attestation.

STANDARD 10. Cyclical external quality assurance of study programmes

Compliance with the standard: **full compliance**

Good practice:

The University participates in the procedures of external quality assurance in various forms: performance monitoring, external audit of the quality management system, independent evaluation of the educational programmes in terms of public accreditation.

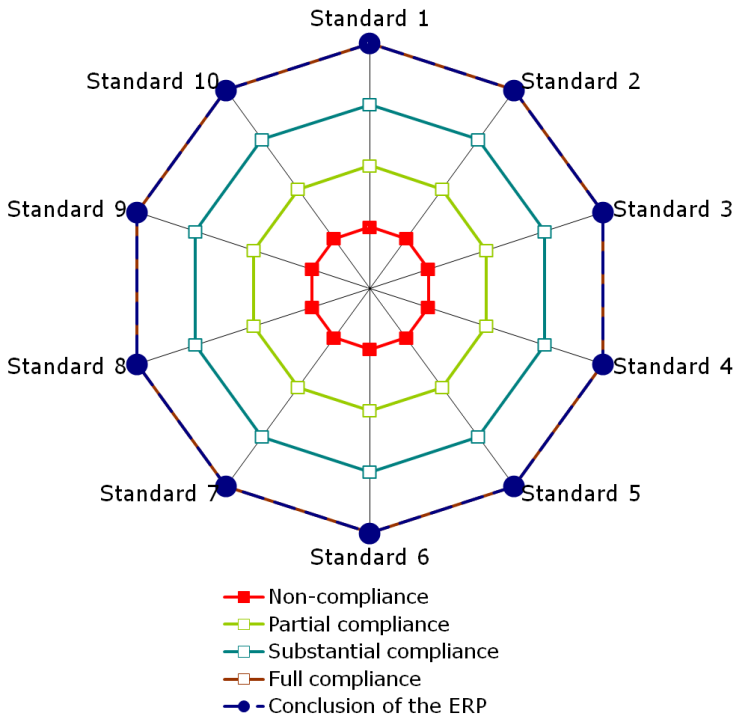
In 2019 the University successfully passed the procedure of state accreditation.

The University regularly participates in the top-rated evaluation systems and achieves high results.

Areas for improvement:

It is recommended that the educational institution should continue to participate in the procedure of independent evaluation in order to create a positive image of the University.

DISTRIBUTION DIGRAM OF THE EXTERNAL REVIEW OUTCOMES



- 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 «Biotechnology» (19.03.01, 19.04.01) **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 «Biotechnology» (19.03.01, 19.04.01) delivered by National Research Ogarev Mordovia State University for the period of **six years**.

SCHEDULE OF THE SITE VISIT OF THE EXTERNAL REVIEW PANEL

Time	Activity	Participants	Venue
December 17, Tuesday			
8.00	Transfer from the hotel "Saransk" to the University, 68, Bolshevistskaia Str.		
8.30 – 10.00	First meeting of the External Review Panel	ERP, NCPA coordinator, interpreter	Building 1, 14 th floor, Room 1404, 68, Bolshevistskaia Str.
10.00 – 11.00	Meeting of the ERP with the University administration and people responsible for accreditation	Rector, Vice-Rectors, people responsible for accreditation, ERP	Building 1, 13 th floor, Conference Hall, Room 1302, 68, Bolshevistskaia Str.
11.00 – 12.00	Tour of the University (visiting museum, library, Centre of Distance Learning, Centre of New Information Technologies, etc.)	ERP	Buildings 1,2, 68, Bolshevistskaia Str.
12.00 – 13.30	Lunch		Dining Room, 68B, Bolshevistskaia Str.
13.30 – 14.00	Transfer to Building 14		Building 14, 26/6, Ulianova Str.
14.00 – 14.30	Tour of the Faculty (visiting classrooms, laboratories, etc.)	ERP, Faculty representative, NCPA coordinator	classrooms, Building 14, 26/6, Ulianova Str.
14.30 – 15.00	Internal meeting of the Panel	ERP, NCPA coordinator	Building 14, Room 315, 26/6, Ulianova Str.
15.00 – 16.30	Meeting with Dean, Head of Department, Manager for Quality	Dean, Deputy Deans, Heads of Departments, Manager for Quality, ERP	Building 14, Conference Hall, Room 317, 26/6, Ulianova Str.
16.30 – 18.00	Internal meeting of the Panel, work with documents	ERP, NCPA coordinator	Building 14, Room 315, 26/6, Ulianova Str.
18.00 – 19.00	Meeting with graduates	Graduates, ERP	Building 14, Conference Hall, Room 317, 26/6, Ulianova Str.
19.00 – 19.15	Internal meeting of the Panel	ERP	Building 14, Room 315, 26/6, Ulianova Str.

Time	Activity	Participants	Venue
December 18, Wednesday			
9.30	Transfer from the hotel to Building 14		
10.00 – 11.00	Meeting with teachers	Teachers, ERP	Building 14, Conference Hall, Room 317, 26/6, Ulianova Str.
11.00 – 11.30	Internal meeting of the Panel	ERP	Building 14, Room 315, 26/6, Ulianova Str.
11.30 – 12.30	Attending classes	ERP	Building 14, 26/6, Ulianova Str.
12.30 – 13.30	Lunch		Dining Room, 68B, Bolshhevistskaia Str.
13.30 – 14.30	Meeting with students	Students, ERP	Building 14, Conference Hall, Room 317, 26/6, Ulianova Str.
14.30 – 18.00	Internal meeting of the Panel , work with documents	ERP	Building 14, Room 315, 26/6, Ulianova Str.
18.00 – 19.00	Meeting with representatives of professional community	Employers, ERP	Building 14, Conference Hall, Room 317, 26/6, Ulianova Str.
19.00 – 19.15	Internal meeting of the Panel	ERP	Building 14, Room 315, 26/6, Ulianova Str.
December 19, Thursday			
8.45	Transfer from the hotel "Saransk" to the University, 68, Bolshhevistskaia Str.		
9.00 – 12.00	Internal meeting of the Panel: discussion of preliminary results of the site visit, preparation of the oral report of the panel	ERP	Building 1, 14 th floor, Room 1404, 68, Bolshhevistskaia Str.
12.00 – 13.00	Closing meeting of the External Review Panel with the representatives of the University	ERP, University administration, Heads of the Departments, teachers, students	Building 1, 13 th floor, Conference Hall, Room 1302, 68, Bolshhevistskaia Str.
13.00 – 14.00	Lunch		Dining Room, 68B, Bolshhevistskaia Str.
	Departure		