MINISTRY OF EDUCATION AND SCIENCE
OF THE RUSSIAN FEDERATION
MOSCOW STATE UNIVERSITY OF EDUCATION

APPROVED by
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PROGRAMME HANDBOOK

Master's Degree Programme
«Management of Research, Development, Innovation in the University»

44.04.01 Pedagogical education

Co-funded by the
Tempus Programme
of the European Union

ALIGN

Moscow, 2017

ACHIEVING AND CHECKING THE ALIGNMENT BETWEEN ACADEMIC PROGRAMMES AND QUALIFICATION FRAMEWORKS (ALIGN)

Printed with the support of the EU-funded ALIGN project. The ALIGN project seeks to enhance the intelligibility, consistency and transferability of qualifications through development and implementation of mechanisms for HEIs to achieve alignment with QFs and for EQAs to check such alignment. It aims at:

- promoting a better understanding of HEIs and EQAs of the role of QFs, their structure, the differences between the different kinds and levels of student achievement,
- building on the capacity of HEIs to write and assess LOs that define the various types of student achievement;
- building on the capacity of the HEIs to use the QF alignment to facilitate student transfer, joint qualifications and benchmarking;
- enabling the EQAs to check whether proposed LOs and their assessment mechanisms match the QF descriptors at each level by establishing mechanisms for ensuring consistency of judgments across institutions.

Handbook Contents

1. Rationale for the Program

This higher education programme handbook contains a comprehensive description of the main educational features, namely the coverage, contents and planned outcomes of the educational programme as well as forms of assessment and organisational framework required to carry out a high-quality education process. The present curriculum builds on the latest scientific, technical and technological developments, strategic objectives in the area of research and education development, as outlined in the following state programmes and strategical documents:

- Strategy of the Scientific and Technological development of the Russian Federation, adopted by the Presidential Decree On the Strategy of Scientific and Technological Development of the Russian Federation, No. 642, dated 1 December 2016

- National technological initiative, or NTI, a state-run programme of measures aimed at encouraging the development in Russia of prospective areas of economy (the Protocol of the Presidential Council for Economic Modernisation and Innovations Presidium meeting, 14 February 2017, No. 1, On Planning the Implementation of the National Technological Initiative).

- Federal Programme Targeting Research and Development in Priority Areas of Russia's Scientific and Technology Complex In the years 2014---2020. Adopted by the Russian Government decree No. 426, dated 21 May 2013

- Federal Programme Targeting Education System Development in the Years 2016—2020, adopted by the RF government degree No. 497 , dated 13 May 2015, entitled “On the Federal Programme Targeting Education System Development in the Years 2016—2020, as amended on 2 February 2017)

The present curriculum objective is educating highly-qualified researchers and teachers, higher education and professional training teachers, specialised researchers, experts in the field of scientific and technological development and scientific research project managers.

Training of pedagogical and managerial personnel for universities that are able to implement the policy of scientific-technological and innovative development in the model of "University 3:0" (research University) is a new direction in the Russian educational practice, the need for implementation which is conditioned by current socio-economic changes:

- state Strategy of scientific and technological development,
- increase competitiveness of universities
- development on the labour market, academic careers in different specializations: a teacher-researcher, head of scientific research, researcher of the laboratory of the University, Director of the REC (research and education centre of the University), MIP (Small innovative enterprises of the University), R&D Centers of universities (University centers of research and development), head of the international group of researchers, etc.

In addition, the professional activities of teachers professional education and additional professional education (senior lecturers, associate professors, professors) dramatically increased the volume of functions related to the organization of scientific-research and design activity of students, participation of academic staff (faculty, University) to research the agile software development principles and innovative projects, including international level. Has also increased the need of increasing publication activity of teachers/University professors, public presentation of research results and innovation projects in journals indexed in Russian science citation index, Skopus, Web of Science).

In addition, the universities have changed the paradigm of training aimed at developing human capital through strengthening the role of practice-oriented courses, development of network forms of realization of educational programs in conjunction with innovative organizations, high-tech companies and research centers, development of international academic mobility of teachers and students.

This determines the objective necessity for the development and implementation of the educational program focused on training and retraining of teachers and managers of universities that can carry out professional activities in the logic of the development of new models of universities (research and entrepreneurial universities, universities NTI).

To the development of graduate programs in the direction 44.04.01 "Pedagogical education" (level – master) allowed persons with higher education and successfully passed entrance examinations (interview, motivation letter, portfolio) in accordance with the Rules of admission to higher education programmes (level – master).

2. Selection of the Program

The program "Management of Research, Development, Innovation in the University" was chosen in order to assess its compliance with European quality standards in the field of higher education, since this is the first program at the University, designed on the basis of professional standards (national qualifications framework) and in accordance with the European framework of qualifications.

An important reason for choosing this program is the focus of the programme on research and development and improving the quality of learning and teaching.

The basic idea of the program is to prepare a new class of university lecturers and researchers who would be able to work in the new model of the university so-called the "University 3.0" (research/entrepreneurial University) within the scope of activities "Education and pedagogical Sciences".

The experts, who were invited to develop the programme and read the courses work with the Ministry of education and science of the Russian Federation, the Agency for QS University rankings, the SKOLKOVO Institute of science and technology, RUSNANO (implements the state policy on development of nanoindustry, being a co-investor in nanotechnology projects with substantial

economic potential or social benefit), Roscosmos (coprorate space activities), etc.

The main purpose of this program is to prepare the University personnel who would be in demand in the education management system and able to combine the pedagogical, scientific and organizational work.

Realization of this program in the University provides the creation of organizational, scientific-methodical, educational and information-analytical conditions and prerequisites for the development of the University research activities, as well as improves the competitiveness of the University and ensure its entry into the world's leading research universities for teacher training.

The program was developed in conditions when the national qualifications framework has not yet been approved because of differences in the existing approaches of the contents of the sections/levels of national qualifications framework and terminology used. The sectoral qualifications framework in the field of scientific research and scientific-pedagogical activities has not yet developed. The national legislation governing the network forms of realization of the educational programs needs serious improvement.

It should be emphasized that the program is new and designed specifically to meet the European quality standards in higher education. In the course of this year it is planned to hold testing of several modules to begin a full-scale implementation in the next year.

Ways of further improvement and development of a program for its implementation through networked forms through using the resources of several organizations with educational activities and, accordingly, awarding of diplomas of several organizations. It may be Russian or foreign organizations with the resources necessary for the implementation of education, training and work practices.

The promising direction of development of this program is the implementation of e-learning and distance educational technologies with the use of the funds of the portal of distance learning of the Moscow State Pedagogical University - InfoDa Moodle (http://do.mpgu.edu/) and the existing digital library of the University (http://мпгу.рф/ob-mpgu/struktura/biblioteka/elektronnyie-resursyi/), providing students free access to databases and electronic textbooks. The prospective distance learning technologies that are being developed: case studies, sample-technology (virtual interaction in combination with the actual practices), Internet technologies, which provides learning through virtual interaction. In the framework of further development of the programme it is planned to work on the organization of webinars and development of modules focused on the needs of specific regions. Several modules are planned to be implemented exclusively with the use of e-learning and distance educational technologies.

The future practice of implementing the e-learning and distance learning technologies within the programme would be analysed for broader application in the University and for the possible organization of training courses for pedagogical, managerial employees and educational support personnel.

The promising direction of development of the program is its implementation as the program of vocational lifelong education in partnership with leading Russian and foreign universities and other organizations with the opportunity for the listeners to study in partner universities.

3. Students and career planning

The master program "Management of Research, Development, Innovation in the University" would enroll students holding a diploma of bachelor or specialist degree of Russian or foreign University.

Further implementation of the program in a network form would involve a wide range of listeners - the students from different regions of Russia, foreign students, mainly from countries such as Belarus, Ukraine, Kazakhstan, Kyrgyzstan. The implementation of the program in the form vocational lifelong education programme would involve the lecturers and scientific employees of other universities and research organizations, the school teachers and other interested listeners both from Russian regions and from abroad.

The program aims to support the personal growth of students, development of student employment system, creation of a broad base of current knowledge. The programme focuses on strengthening the relationship between research, learning and teaching given the global trends of education development and international standards in higher education.

The professional context of the academic programmes reviewed is mainly determined by the corresponding **Federal State Educational Standards for Higher Education and Occupational Standards** ("Educator"), which prescribe the requirements to the programme workload, graduate competency, programme staff team, quality of tuition, facilities and resources.

According to the Federal State Educational Standards for Higher Education the structure of masters degree programmes includes three blocks: modules, practice (including research) and state final assessment (see the Table below).

The Programme "Management of Research, Development and Innovations in University"is also placed in a wider professional context - it has been developed in collaboration with Roskosmos, Rosnano, Skoltech and other agencies and stakeholders.

4. Programme Details

Awarding and teaching Institution: Moscow State Pedagocical University

Final Award: Masters' degree in pedagogical education

Programme Title: Management of Research, Development, Innovation in the University

Programme Code: 44.04.01

Programme Accreditation: In Process

NFQ Level: 7

Credits (ECTS): 120

Programme Duration: 2 years

Modes of attendance offered (full-time, part-time, e-learning /distance): Full-time

Language of instruction: Russian

Programme Coordinator: Dr. Fiofanova O.A.

Last updated: August 2017

Mission: Educating highly-qualified staff such as professional education teachers, supplementary professional education teachers, research specialists, experts in the field of science and technology development, research project leaders, capabye of making and implementing decisions that meet the requirements of legality, innovativeness, effectiveness of development of research activities of the Russian Federation universities, proficient in use of project management technologies, capable of supporting development, legal framework development and implementation of the scientific and technological development policy, innovations projects and research and development of the university, as well as state contracts signed by the university as part of the Federal Programme Targeted and Research and Development and other state science and education programmes.

Objectives: educating staff for the system of management of research and innovations activities in universities, capable of organising education, project and research activities of students at a high level, having the necessary competencies enabling them to perform management, project, research and educational activities as well as specialised competences necessary to manage research, development, and innovations in universities.

Alignment to national educational and occupational standards and other regulatory documents:

The Law of the Russian Federation on Education (No 273-FL, dd. 29.12.2012);

Federal State Educational Standard for Higher Education (hereinafter, FSES-HE) 05.04.06 Master's Level

Procedures for Managing Higher Education Degree Programmes (bachelor’s, master’s and specialist’s degrees), approved by RF Ministry of Education and Research (Order No1367, dd. 19.12.2013);

Guidelines for Institutions of Higher Education in Providing Conditions for Teaching and Learning of Physically Challenged Students and Students with Special Needs, approved by RF Ministry of Education and Research (Order No АК-44/05 dd. 08.04.2014);

Guidelines in Developing Higher Education Degree Programmes and Programmes of Continuing Education with Consideration of Corresponding Occupational Standards, approved by RF Ministry of Education and Research (Order No ДЛ-01/05, dd. 22.01.2015);

- the Federal State Education Standard of Higher Education in the Area 44.04.01 Pedagogical Education (level: Master's degree), adopted by the Education

Ministry's order No. 1505 "On Adopting the Federal State Educational Standard for Higher Education in the Area 44.04.01 Pedagogical Education (Level: Master's Degree), dated 21 November 2014 (http://fgosvo.ru/news/3/553).

- the professional standard "Pedagogue of Professional Training, Professional Education or and of Supplementary Professional Education", adopted by the Ministry of Labour and Social Protection order "On Adopting the Professional Standard 'The Pedagogue of Professional Training, Professional Education, and of Supplementary Professional Education'" No. 608n, dated 8 September 2015 and registered by the Russian Justice Ministry on 24 September 2015, No. 38993.

□□internal University Regulations.

Alignment to international standards and requirements:

□The European Qualifications Framework (EQF)

Admission: students that have higher education and correlating portfolio should pass the interview and write motivational essay to enter the program.

Graduate competency: Management of Research, Development and Innovations in Universities

5. Program learning outcomes

The learning outcomes of the programme are formed on the basis of the professional standard «Pedagogue of Professional Education, Professional Training, Supplementary Professional Education», and the professional standard «Scientist (Scientific Research)», Master's degree holder.

In the design of the programme it was taken take into account the new wording of the Federal state educational standard of higher education in the direction of training 44.04.01 Pedagogical education (master's level), according to which professional competence set by the graduate program, are based on professional standards, relevant to the professional activities of graduates (if applicable) and, if necessary, on the basis of the analysis of requirements to professional competencies requirements for graduates in areas of training in the labour market, synthesis of international experience, consultation with leading employers, employers ' associations industry.

Learning Outcomes of the Programme

LO1: Руководство научно-исследовательской, проектной, учебно-профессиональной и иной деятельностью обучающихся по программам высшего образования и ДПО; I/03.7 (ук 7.2)	LO1: Management of research, design, educational, professional and other activities of students on higher education programmes and dditional education (lifelong education); I/03.7 (7.2 UK)
LO2: Разработка научно-методического обеспечения образовательных программ; I/04.8 (ук 8.1)	LO2: Development of scientific and methodological support of educational programs; I/04.8 (MC 8.1)
LO3: Преподавание учебных курсов, дисциплин (модулей), проведение учебных занятий по программам высшего образования и дополнительного профессионального образования; I/01.7 (ук 7.2)	LO3: Teaching courses, disciplines (modules), training on programmes of higher education and additional professional education (lifelong education); ; I/01.7 (7.2 UK)
LO4: Профессиональная поддержка специалистов, участвующих в реализации курируемых учебных курсов, дисциплин (модулей), организации учебно-профессиональной, исследовательской, проектной и иной деятельности обучающихся по программам высшего образования; I/02.7 (ук 7.3)	LO4: Professional support for professionals involved in the implementation of the supervised training courses, disciplines (modules), training-professional, research, project and other activities of students on higher education programmes; I/activity 02.7 (CC 7.3)
LO5: Организация и проведение изучения требований рынка труда к качеству высшего и дополнительного профессионального образования; F/01.6 (ук 6.3)	LO5: Organization and carrying out studies on the requirements of the labour market according to the quality of higher education and additional professional education; F/01.6 (MC 6.3)
LO6: Организационно-педагогическое сопровождение методической деятельности преподавателей университета; F/02.6 (уровень квалификации 6.3)	LO6: Organizational and pedagogical support of methodical activities of faculty; F/02.6 (skill level 6.3)
LO7: Мониторинг и оценка качества реализации преподавателями учебных курсов, дисциплин (модулей), практик; F/03.6 (ук 6.3)	LO7: Monitoring and evaluation of the quality of implementation of courses, disciplines (modules), practical training by professors; F/03.6 (MC 6.3)
LO8: Рецензирование и экспертиза научно-методических и учебно-методических материалов,	LO8: Review and assessment of scientific, methodical and educational materials providing realization of the

обеспечивающих реализацию программ высшего и дополнительного профессионального образования; G/02.7 (ук 7.3)	programs of higher and additional professional education; G/activity 02.7 (CC 7.3)
LO9: Разработка научно-методических и учебно-методических материалов, обеспечивающих реализацию программ высшего и дополнительного профессионального образования; G/01.7 (ук 7.3)	LO9: Development of scientific, methodical and educational materials providing realization of the programs of higher and additional professional education; G/01.7 (CC 7.3)
LO10: Педагогический контроль и оценка освоения образовательной программы высшего и дополнительного профессионального образования в процессе промежуточной и итоговой аттестации, A/02.6 (ук 6.2)	LO10: Pedagogical supervision and evaluation of educational programs of higher and additional professional education in the interim and final certification, A/02.6 (6.2 UK)
LO11: Преподавание учебных курсов, дисциплин (модулей) по программам подготовки кадров высшей квалификации; J/01.7 (ук 7.3)	LO11: Teaching of courses, disciplines (modules) in the training programmes of personnel of higher qualification; J/01.7 (CC 7.3)
LO12: Руководство подготовкой аспирантов по индивидуальному учебному плану; J/04.8 (ук 8.2)	LO12: Management of the preparation of graduate students according to individual education plan; J/04.8 (8.2 UK)
LO13: Руководство подготовкой ассистентов-стажеров по индивидуальному учебному плану; J/05.8 (ук 8.2)	LO13: Management of the preparation of assistants-in-training according to individual curriculum; J/05.8 (8.2 UK)
LO14:Педагогический контроль и оценка освоения квалификации в процессе учебно-производственной деятельности обучающегося, B/02.6 ук 6.2)	LO14: Pedagogical supervision and evaluation of the development of the qualification in the training and production activity of the learner, In/02.6 6.2 UK)
LO15: Руководство группой специалистов, участвующих в реализации образовательных программ высшего образования и дополнительного профессионального образования; O/02.8 (ук 8.2)	LO15: Management of the group of specialists involved in the implementation of educational programs of higher education and additional professional education; About/02.8 (8.2 UK)
LO16: Социально-педагогическая поддержка обучающихся по программам высшего	LO16: Social and pedagogical support of students on higher education programmes in their education activities

образования в образовательной деятельности и в профессионально-личностном развитии; D/02.6 (уровень квалификации 6.1)	and in professional and personal development; D/02.6 (skill level 6.1)
LO17: Создание педагогических условий для развития группы (курса) обучающихся по программам высшего образования; D/01.6 (уровень квалификации 6.1)	LO17: Creating pedagogical conditions for the development of the group of students (of course) enrolled in higher education programmes; D/01.6 (skill level 6.1)
LO18: Организация научно-исследовательской, проектной, учебно-профессиональной и иной деятельности обучающихся по программам высшего образования; H/02.6 (ук 6.2)	LO18: Organization of scientific-research, design, educational, professional and other activities of students on higher education programmes; H/02.6 (6.2 UK)
LO19: Представление научных (научно-технических) результатов профессиональному сообществу; A/02.7 (ук 7)	LO19: Presentation of scientific (scientific and technical) results to the professional community; A/activity 02.7 (UK 7)
LO20: Наставничество в процессе проведения исследования; B/02.8.1 (ук 8.1)	LO20: Mentoring in the research process; B/02.8.1 (MC 8.1)
LO21: Определение возможностей распоряжения правами на результаты интеллектуальной деятельности, полученными в ходе исследований и разработок, и (или) их доведение до всеобщего сведения; И/03.8.1. (ук 8.1)	LO21: Identify the opportunities for the disposal of rights to R&D results obtained on of research and development practices, and (or) their distribution to the public; And/03.8.1. (QM 8.1)
LO22: Организация профессионального и межпрофессионального взаимодействия коллективов исполнителей в процессе проведения исследований в рамках реализации научных (научно-технических, инновационных программ и проектов); D/03.9.1 (ук 9.1)	LO22: Organization of professional and interprofessional interaction of research teams in the process of conducting research in the framework of the scientific (scientific-technical and innovation programs and projects); D/03.9.1 (CC 9.1)
LO23: Популяризация возможных изменений в науке, социально-экономической системе и обществе в результате развития новых и (или) перспективных научных направлений; E/05.9.2 (ук 9.2)	LO23: Popularization of science, socio-economic system development as a result of the development of new and (or) advanced research directions; E/05.9.2 (CC 9.2)
LO24: Оценка вклада в развитие науки и (или) социально-экономической системы при использовании научных (научно-	LO24: Evaluation of the contribution of scientific (scientific and technical) results to the development of science and (or) socio-economic system;

технических) результатов; Е/04.9.2 (ук 9.2)	Е/04.9.2 (СС 9.2)

PROGRAMME LEARNING OUTCOME ALIGNMENT WITH EUROPEAN AND NATIONAL FRAMEWORKS AND DUBLIN DESCRIPTORS FOR MASTERS AWARDS				
European Qualifications Framework (EQF), Level 7, Master	**National Qualification framework of RF (NQF), Level 7, Master**	**National Qualification framework of Ireland, Level 9, Master**	**Programme Learning Outcomes**	**Modules**
Highly specialised knowledge, some of which is at the forefront of knowledge in a field of work or study, as the basis for original thinking and/or research	Capable of selecting sources and searching for information necessary for further development of professional activities and/or company	Knowledge (breadth): A systematic understanding of knowledge at the t forefront of a field of learning	LO4, LO6, LO16, LO19	Module A, Module B, Module C, Module D, Module E
Critical awareness of knowledge issues in a field and at the interface between different fields	Capable of creating new applied knowledge in a certain field or at the interfaces of different fields	Knowledge (kind): critical awareness of current problems and new insights, generally informed by the forefront of a field of learning	LO5, LO6, LO9, LO16, LO19, LO23, LO24	Module A, Module B, Module C, Module D, Module E
Specialised problem-solving skills required in research and/or innovation in order to develop new knowledge and procedures and to integrate knowledge from different fields	Capable of achieving development goals in the field of professional activity by employing new methods and approaches including innovative ones. Develop new methods, approaches and technologies	Know-how and skill (range): Demonstrate a range of standard and specialized research or equivalent tools and techniques of enquiry. Know-how and skill (selectivity): Select from complex and advanced skills across a field of learning; Develop new skills to	LO1, LO3, LO4, LO5, LO10; LO11, LO12, LO13, LO14; LO17, LO18, LO22; LO2, LO16, LO19, LO23, LO24	Module A, Module B, Module C, Module D, Module E

Manage and transform work or study contexts that are complex, unpredictable and require new strategic approaches	Define strategy, manage processes and activities (including innovative ones), make decisions at the level of institutional structures and their subdivisions	Competence (context): Act in a wide and often unpredictable variety of professional levels and ill-defined contexts. Competence (insight): Scrutinise and reflect on social norms and relationships and act to change them	LO1, LO4, LO5, LO6, LO12, LO13, LO15, LO17, LO18, LO20, LO21, LO22	Module A, Module B Module C, Module D, Module E
Take responsibility for contributing to professional knowledge and practice and/or for reviewing the strategic performance of teams	Take responsibility for the performance results of organizations or subdivisions making constituent parts of large- scale institutional structures	Competence (role): Take significant responsibility for the work of individuals and groups; Lead and initiate activity. Competence (learning to learn): Learn to self-evaluate and take responsibility for	LO1, LO5, LO6, LO7, LO8, LO10; LO14, LO15, LO18, LO20, LO21, LO22,	Module A, Module B Module C, Module D,

6. Proposed structure and modules of the Program

Master Programme
"Management of research, development, innovation in the university"

Course code	Course name	Academic hours according curriculum	Total planned credits	Assessment form
	A. The module "Analysis of reforms of science and education	256	6	
	Compulsory courses			
A1	State policy in the sphere of science and education in Russia	36	1	Exam
A2	Comparative analysis of the reforms of science and education in the world	36	1	Exam
A3	National technology initiative and the universities of NTI	40	1	Control test, academic assessment
A4	Managing an academic mobility of teachers and researchers at the University international scientific and educational grants	48	1	Control test, academic assessment
A5	History and theory of innovative development	48	1	Exam
A6	Scientific and technological structures and the transformation of universities	48	1	Control test, academic assessment
	B. The module «Management of research and innovation projects in the sphere of science and education»	458	12	
	Compulsory courses			
B1	Academic rankings of world universities	18	1	Exam
B2	Indicative management of research activities at the University	72	2	Exam
B3	Managing updating the content of education at the University on the basis of the results of research and development	36	1	Exam
B7	Managing an academic mobility of teachers and researchers at the University international scientific and educational grants	36	1	Control test, academic assessment
B8	Theory and practice of academic journalism: publications in journals indexed in Russian science citation index, Skopus, Web of Science	40	1	Control test, academic assessment
	Optional courses			
B9	Objects of patent rights and	48	1	Control test,

Course code	Course name	Academic hours according curriculum	Total planned credits	Assessment form
	registration of intellectual property rights			academic assessment
B10	The market of intellectual products (inventions and innovations)	36	1	Exam
B11	Marketing of intellectual products	48	1	Control test, academic assessment
B4	Fundraising research and innovation projects of the University	40	1	Control test, academic assessment
B5	The science of science and scientometrics	36	1	Exam
B6	Technological entrepreneurship and forms of its organization in universities	48	1	Exam
	C. The module "Modern technologies of the organization of education in the research University"	408	14	
	Compulsory courses			
C1	Modern educational technologies in University	72	2	Exam
C2	Organization of project and research activity of students	48	1	Exam
C4	The design of the educational environment at the University	36	1	Exam
C5	Integration of innovative projects of universities with projects of social policy of state corporations and high technology companies, foundations	72	2	Control test, academic assessment
C12	Design of educational programs of higher education on the basis of professional standards (national qualifications framework)	48	1	Exam
	Optional courses			
C6	Managing software innovation projects in the field of education	16	1	Control test, academic assessment
C8	Innovation and development in linguistic education	16	1	Control test, academic assessment
C9	Innovations and development in science education	16	1	Control test, academic assessment
C10	Innovation and development in education	16	1	Control test, academic assessment
C11	Innovation and development in engineering and technology education	16	1	Control test, academic assessment
	Elective courses			

Course code	Course name	Academic hours according curriculum	Total planned credits	Assessment form
C3	Pedagogical mathetika	16	1	Control test
C7	Nanotechnologies in education	36	1	Control test
	D. The module "Evaluation of the quality of education in the University"	124	4	
	Compulsory courses			
D1	Organization of the system of education quality assessment at the University	36	1	Exam
D4	Certification of competences and qualifications	36	1	Exam
	Optional courses			
D2	Design assessment tools, development of educational programs	36	1	Control test, academic assessment
D3	Accreditation of study programs	16	1	Exam
	E. The module "Managing human capital development in the University	248	7	
	Compulsory courses			
E1	Psychology of development of the subject of activity	48	1	Exam
E3	Psychology of the collective and the basis for the development of social capital of educational organization	36	1	Exam
E7	Scientific and organizational consulting design and research works of students	36	1	Control test, academic assessment
	Optional courses			
E2	Theory and practice of human capital development	16	1	Control test, academic assessment
E4	The development of thinking, logic, mapping, the solution of inventive problems	36	1	Control test, academic assessment
E6	Organization of activities of the project teams: from project to product	40	1	Exam
	Elective courses			
E5	Anthropopractice University	36	1	Control test
	Practice	**2052**	**57**	
	Research seminar (SRS)	72	2	
	Teaching practice/internship in the Department	72	2	
	Research practice/ internship in a laboratory, research center	72	2	
	Design practice/internship in the companies network partners education program	72	2	
	Scientific-research work	792	22	
	Pre-diploma Practice	1008	28	
	State final Examination	**216**	**6**	

Module A (Basic Module): Analysis of reforms of science and education

Module Title	**Module A: Analysis of reforms of science and education**							
Degree Programme	**44.04.01 Management of Research, Development, Innovation in the University**							
ECTS	**6 ECTS**							
Module Overview: units, aim, tasks, what skills are developed.	The aim of the module is to get aknowledged with main state policies in science/education areas, to develop ability to critically evaluate theory, principles, methodological ideas. Also innovation issues, and academic mobility and academic regional and cross-cultural differences are reviewed.							
Module Learning Outcomes (LO)	LO1, LO2, LO4, LO5, LO8, LO9, LO17, LO18, LO19, LO22, LO24							
Teaching and Learning Strategies	Several teaching methods are employed, including lectures, seminars, laboratory work, computer lab and field courses. Students are encouraged to actively participate in group discussions, lab / field work, critically analyze current literature. Before each practical/lab, the students are required to read selected course literature.							
Assessment Strategies	Examination/control tests are used for each discipline. Also, current assessment tasks are built into learning process through feedback on completion of individual and group assignments which include essays, reports and presentations.							
Module Units	Code	Title	ECTS	Learning Outcomes (LO)	Status (M-mand. O-opt. E-elect.)	Indicative Study Hours		
						Directed	Self-Directed	Total
	A1	State policy in the sphere of science and education in Russia	1	LO5, LO22, LO19	M	18	18	36
	A2	Comparative analysis of the reforms of science and education in the world	1	LO5, LO24, LO18	M	18	18	36
	A3	National technology initiative and the universities of NTI	1	LO8, LO18, LO2, LO9	M	20	20	40
	A4	Managing an academic mobility of teachers and researchers at the University international scientific and educational grants	1	LO1, LO22	M	24	24	48
	A5	History and theory of	1	LO18, LO24,	M	24	24	48

		innovative development		LO4				
	A6	Scientific and technological structures and the transformation of universities	1	LO18, LO4, LO5, LO17	M	24	24	48

Module B: Management of research and innovation projects in the sphere of science and education

Module Title	**Module B: Management of research and innovation projects in the sphere of science and education**							
Degree Programme	**44.04.01 Management of Research, Development, Innovation in the University**							
ECTS	**12 ECTS**							
Module Overview: units, aim, tasks, what skills are developed.	This module is aimed at understanding and developing the academic management skills, getting to know the fundraising activitiues and publication principles as well as patent rights and procedures. Also we cover marketing issues of intellectual products, and developing and implementing science work througout the university thus laying a strong academic basis in the university.							
Module Learning Outcomes (LO)	LO1, LO2, LO6, LO7, LO8, LO9, LO17, LO18, LO19, LO20, LO21, LO23, LO24							
Teaching and Learning Strategies	Several teaching methods are employed, including lectures, seminars, laboratory work, computer lab and field courses. Students are encouraged to actively participate in group discussions, lab / field work, critically analyze current literature. Before each practical/lab, the students are required to read selected course literature.							
Assessment Strategies	Examination/control tests are used for each discipline. Also, current assessment tasks are built into learning process through feedback on completion of individual and group assignments which include essays, reports and presentations.							
Module Units	Code	Title	ECTS	Learning Outcomes (LO)	Status (M-mand. O-opt. E-elect.)	Indicative Study Hours		
						Directed	Self-Directed	Total
	B1	Academic rankings of world universities	1	LO8, LO24, LO19	M	9	9	18
	B2	Indicative management of research activities at the University	2	LO18, LO8, LO1	M	36	36	72
	B3	Managing updating the content of education at the University on the basis of the	1	LO17, LO6, LO7, LO9	M	18	18	36

		results of research and development						
	B4	Fundraising research and innovation projects of the University	1	LO23, LO2	O	20	20	40
	B5	The science of science and scientometrics	1	LO23, LO24, LO1	O	18	18	36
	B6	Technological entrepreneurship and forms of its organization in universities	1	LO1, LO23, LO24	O	24	24	48
	B7	Managing an academic mobility of teachers and researchers at the University international scientific and educational grants	1	LO1	M	18	18	36
	B8	Theory and practice of academic journalism: publications in journals indexed in Russian science citation index, Skopus, Web of Science	1	LO1, LO19, LO20, LO21	M	20	20	40
	B9	Objects of patent rights and registration of intellectual property rights	1	LO1, LO19, LO20, LO21	O	24	24	48
	B10	The market of intellectual products (inventions and innovations)	1	LO1, LO18, LO19, LO21	O	18	18	36
	B11	Marketing of intellectual products	1	LO1, LO18, LO19, LO21	O	24	24	48

Module C: Modern technologies of the organization of education in the research University

Module Title	**Module C: Modern technologies of the organization of education in the research University**

Degree Programme	**44.04.01 Management of Research, Development, Innovation in the University**							
ECTS	**14 ECTS**							
Module Overview: units, aim, tasks, what skills are developed.	The C module is covering educative aspects of innovations - starting from organizing students' research activities and design of educational envirinment and ending with specific educational aspects of contemporary linguistics, science, engeneering etc.							
Module Learning Outcomes (LO)	LO1, LO3, LO4, LO5, LO6, LO7, LO8, LO9, LO10, LO11, LO12, LO13, LO15, LO16, LO17, LO18							
Teaching and Learning Strategies	Several teaching methods are employed, including lectures, seminars, laboratory work, computer lab and field courses. Students are encouraged to actively participate in group discussions, lab / field work, critically analyze current literature. Before each practical/lab, the students are required to read selected course literature.							
Assessment Strategies	Examination/control tests are used for each discipline. Also, current assessment tasks are built into learning process through feedback on completion of individual and group assignments which include essays, reports and presentations.							
Module Units	Code	Title	ECTS	Learning Outcomes (LO)	Status (M-mand. O-opt. E-elect.)	Indicative Study Hours		
						Directed	Self-Directed	Total
	C1	Modern educational technologies in University	2	LO16, LO17, LO18, LO1	M	36	36	72
	C2	Organization of project and research activity of students	1	LO16, LO18, LO1	M	24	24	48
	C3	Pedagogical mathetika	1	LO1, LO3, LO10	E	8	8	16
	C4	The design of the educational environment at the University	1	LO17, LO8, LO18	M	18	18	36
	C5	Integration of innovative projects of universities with projects of social policy of state corporations and high technology companies, foundations	2	LO17, LO5, LO18, LO1	M	36	36	72
	C6	Managing software innovation projects in the field of education	1	LO5, LO13	O	8	8	16
	C7	Nanotechnologies in education	1	LO1, LO3, LO18	E	18	18	36
	C8	Innovation and development in linguistic education	1	LO3, LO8, LO15, LO12, LO13	O	8	8	16

	C9	Innovations and development in science education	1	LO3, LO4, LO15, LO12, LO13	O	8	8	16
	C10	Innovation and development in education	1	LO3, LO4, LO15, LO12, LO13	O	8	8	16
	C11	Innovation and development in engineering and technology education	1	LO3, LO4, LO11, LO15, LO12, LO13	O	8		16
	C12	Design of educational programs of higher education on the basis of professional standards (national qualifications framework)	1	LO6, LO7, LO8, LO9, LO11	M	24	24	48

Module D: Evaluation of the quality of education in the University

Module Title	**Module D: Evaluation of the quality of education in the University**
Degree Programme	**44.04.01 Management of Research, Development, Innovation in the University**
ECTS	**4 ECTS**
Module Overview: units, aim, tasks, what skills are developed.	Module D is covering education quality topics. Students learn to organize quality assessment procedures, to develop educational programmes, to organize their certification and accreditation.
Module Learning Outcomes (LO)	LO2, LO3, LO4, LO6, LO8, LO9, LO10
Teaching and Learning Strategies	Several teaching methods are employed, including lectures, seminars, laboratory work, computer lab and field courses. Students are encouraged to actively participate in group discussions, lab / field work, critically analyze current literature. Before each practical/lab, the students are required to read selected course literature.
Assessment Strategies	Examination/control tests are used for each discipline. Also, current assessment tasks are built into learning process through feedback on completion of individual and group assignments which include essays, reports and presentations.

Module Units	Code	Title	ECTS	Learning Outcomes (LO)	Status (M-mand. O-opt. E-elect.)	Indicative Study Hours		
						Directed	Self-Directed	Total
	D1	Organization of the system of education quality assessment at the University	1	LO3, LO8	M	18	18	36
	D2	Design assessment tools, development of educational programs	1	LO2, LO6, LO9	O	18	18	36
	D3	Accreditation of study programs	1	LO4, LO8, LO9, LO10	O	18	18	16
	D4	Certification of competences and qualifications	1	LO4, LO8, LO9, LO10	M	18	18	36

Module E: Managing human capital development in the University

Module Title	**Module E: Managing human capital development in the University**
Degree Programme	**44.04.01 Management of Research, Development, Innovation in the University**
ECTS	**7 ECTS**
Module Overview: units, aim, tasks, what skills are developed.	Module E is the most Human Resources (HR) - oriented. People are considered as a main resource for academic/innovative activities, being in their active positions. Organizing and nurturing active, thinking, solution-oriented positions and roles of students, teachers, administrative workers is an important skill and competence of this MA programme graduate.
Module Learning Outcomes (LO)	LO1, LO4, LO15, LO16, LO17, LO18, LO20, LO22
Teaching	Several teaching methods are employed, including lectures, seminars, laboratory

and Learning Strategies	work, computer lab and field courses. Students are encouraged to actively participate in group discussions, lab / field work, critically analyze current literature. Before each practical/lab, the students are required to read selected course literature.							
Assessment Strategies	Examination/control tests are used for each discipline. Also, current assessment tasks are built into learning process through feedback on completion of individual and group assignments which include essays, reports and presentations.							
Module Units	Code	Title	ECTS	Learning Outcomes (LO)	Status (M-mand. O-opt. E-elect.)	Indicative Study Hours		
						Directed	Self-Directed	Total
	E1	Psychology of development of the subject of activity	1	LO1, LO17, LO22	M	24	24	48
	E2	Theory and practice of human capital development	1	LO1, LO17, LO22	O	8	8	16
	E3	Psychology of the collective and the basis for the development of social capital of educational organization	1	LO1, LO17, LO22	M	18	18	36
	E4	The development of thinking, logic, mapping, the solution of inventive problems	1	LO1, LO17, LO22	O	18	18	36
	E5	Anthropopractice in Universities	1	LO15, LO16, LO17, LO18, LO20	E	18	18	36
	E6	Organization of activities of the project teams: from project to product	1	LO4, LO15, LO17, LO18, LO20	O	20	20	40
	E7	Scientific and organizational consulting design and research works	1	LO4, LO15, LO17, LO18, LO20	M	18	18	36

		of students						

7. Individualization of education

The learning process is performed according to the student's individual plan, which is a mutual work of a student, his/her academic tutor (advisor) and a programme director with main focus at student's interests and with official approval by the dean of the faculty.

This individual plan specifies intended learning outcomes the student has to attain upon completion of an academic programme. Thus student and his/her advisor can monitor: □

- extent to which the intended objectives are achieved; □
- what information is needed for further improvement of the learning process, methods of □teaching and forms of students individual work; □
- students individual work. □

A formative assessment at the university is implemented based on a module rating technology and online web e-learning system 'INFO-DA' built on MOODLE technology. The data on assessment is available on the university internal portal, it is accessible to all university staff and students.

Assessment criteria are set for each course separately; they are written in the course syllabus and defined in the indovidual plans. The results of student progression are presented as a percentage of maximum score that students are able to gain.

Also before the exams period start, students have to pass the threshold level for all the courses in the term, and only in such a way they can take tests and exams. Such a mechanism ensures the high level of academic standards for credit and awards maintenance.

All delivery and monitoring of the academic programmes is 'student-centered'. There are various ways by which students can be engaged either collectively or individually in the quality assurance processes and in the process of enhancing their learning experience, as students:

- students fill out 'individual plans',
- choose courses from those available in the 'variable part'
- choose the enterprises for internship
- choose the mode of learning (btw, part time mode with distance forms of training) for forming their individual learning paths
- academic advisors meet students on a regular basis (students can share their opinions on programme delivery, learning and living conditions and can make suggestions about the ways how to improve the learning process)
- the programme director implements the mechanism of collecting students' feedback by holding routine surveys, questionnaires regarding the courses, teaching staff, learning conditions and any other relevant issues.

Thus, there are also possibilities for students to participate in the design of the programme:

- deans and the rector hold regular meetings with student activists
- students are engaged collectively in the quality assurance processes through the Student Council of MSPU (see Annex for Regulations of Student Council activities).

8. Education monitoring and student assessment

MSPU has introduced its Regulation on the ongoing monitoring of progress and midterm assessment. This document regulates the forms and norms for monitoring the quality of students' progression through implementing the appropriate assessment methods.

Formative assessment:

- ensures monitoring the course/module acquisition, passing the course papers (projects), internships;

- is implemented according to the technological map upon fulfilling all the assignments, predetermined by the course/module syllabus.

Summative assessment ensures monitoring the learning outcomes – knowledge, skills and competences that characterize the stages of course/module competences acquisition.

Another document ensuring the integrity of assessing students' achievements is *Regulation on examination board (for final state certification), containing:*

- the forms of final state certification (which is either final interdisciplinary examination or public defense of a Master Thesis, the latter is obligatory, while interdisciplinary exam is optional); □
- steps and stages of work on a Master Thesis; □
- the procedure for selecting and appointing a chair and other members of examination □board; □
- the procedure for students' admission, organizing and holding the examination; types and requirement for review of a Master Thesis; □
- the procedure for organizing and holding the examination for people with disabilities; □
- appeal procedure. □

These regulations are approved by the Academic Council in accordance with the requirements of the FSES.

9. Teaching personnel

Program supervisor:
Fiofanova O. A., Doctor of Pedagogy (MPGU)

Course lecturers and leaders:

State directed scientific and educational policy
Matveyev S. Yu., Candidate of Technical Sciencies (RF Education Ministry)
Sobolev A. B., Doctor of Physics and Mathematics (RF Education Ministry)
Comparative analysis of reforms in various countries aimed at encouraging science and education
Fiofanova O. A., Doctor of Pedagogy (MPGU)
National Technological Initiative, or NTI, and NTI universities module
Peskov A. E., Doctor of Economics (Agency for Strategic Initiatives)
History and Theories of Innovative Development module
Strakhov V. V., Candidate of History
Scintific and Technological Paradigms and Universities Transformations
Verkhovsky N. S., Candidate of Physics (Skolkovo)
World Universities Academic Ratings module
Tyurina N. A., Candidate of Pedagogy (Agency for Strategic Initiatives)
Indicative Management of Research in Universities
Fiofanova O. A., Doctor of Pedagogy (MPGU)
Managing education contents on the basis of research and development
Basyuk V. S., Doctor of Psychology (Russian Education Academy)
Integration of Innovation Projects in Universities with State-Run Corporation's Social Policy Projects
Vuchkovich A. A., Candidate of Economy (Roskosmos)
Organising Students' Project and Research Activities
Podrugina I. A., Candidate of Pedagogy (MPGU)
Science studies
Antropova O. A., Candidate of Economic Sciences (MPGU)
Managing Software Innovation Projects in Education
Waldman I. V., Candidate of Pedagogy (Rosnano)

To ensure that the learning and teaching processes at MSPU are at the appropriate level and supported by highly qualified academic/professional/administrative staff, MSPU implemented a procedure to regularly train its staff – **Regulations on professional development of academic personnel in Federal State Budget Educational Institution of Higher Professional Education MSPU**

This document contains the procedure of sending the university staff to professional development and training, internships and other forms of qualification enhancement and the forms of reporting.

The university provides organizational and financial support for qualification enhancement. Also there is a vast choice of courses for the staff (see http://мпгу.рф/prepodavatelyam/kursyi-po-vyiboru).

The qualification can be enhanced as needed but not less than once in 3 years according to national standards (see Regulation on the certification of higher education teaching personnel, approved by the order of 30.03.2015 No 293 of the Russian Ministry of education and science, and Order of 24.03.2010 No209 «On the procedure of attestation of teaching staff of state and municipal educational institutions").

10. Program Quality Assurance

The issues of student policies, interactions, degree programmes design, approval, implementation and revision are described in documents. According to the University Quality Assurance Policy alignment of degree programmes with established requirements (Federal educational and occupational standards, normative and regulatory documents of the Russian Federation Ministry of Education and Research, local regulatory documents) are monitored at different levels:

- Departmental level – by Institute Education Board;
- Institutional / university level – by University Education Board, the University Academic Council of the University, Vice-rector for Education, Rector;
 - National level – through state accreditation and professional-public accreditation of degree programmes.

Aligning procedures are thus integrated into every stage of the process of educational programme design, approval, implementation and revision.

After signing the Bologna agreement in 2003, MSPU began the integration of its educational programmes in the European educational system and began to take part in the national system of quality assurance, which was named «All-Russian system of quality education» (SEDGE) in the federal program of education development for 2006-2010.

In the project of concept OSOKO (version 02.02.08, second edition) in the section III «Internal assessment of quality of education» an organization mission of

«internal monitoring of quality», assuming «regular inspection of all aspects of life of educational institution – qualities of teaching, textbooks and other training materials, objectivity of estimation, a condition of educational rooms» and other kinds of activity was given. In the section IV «Mechanisms of the organization and carrying out an assessment of quality of education», point 3 «Assessment of quality of activity of educational institutions» need of «development of independent (external) estimates of quality of activity of OU received as a result of independent of educational institution and from governing bodies by formation of standardized and universal procedures» is stated. And «documents should be put in a basis of development of standard model of the quality system of educational institution in Russia and models of quality systems on the basis of the ISO series Quality standards».

In 2004, an order was issued by the Federal Agency for Education «On the development and implementation of a quality management system intra-high education in higher education institutions» (№ 304 of 03.12.04). In 2005, continuing with the integrated assessment of universities in the approved list of indicators was included accreditation indicator 1.2.3 intra-high effective quality assurance system (the Federal Service for Supervision in Education № 1938 from 09.30.05). Finally, in 2010, the Federal Law «On Education» There was the addition (Article 32, paragraph 2, item 24) to «ensure the functioning of the internal monitoring of the quality of education in the educational institution.»

Thus, in accordance with European requirements for quality higher education in the concept of SEDGE was tasked to create similar mechanisms quality assessment: intra-high quality assurance system, internal monitoring of educational activities and procedures of an external independent evaluation based on European standards of quality using comparable criteria mechanisms and methods of assessment.

By this time, the practice of mechanisms, assessment and improvement of quality of education the Russian HPE has been formed. Thus, in Russian universities quality assurance system are based mainly on the following documents and models of quality systems in education:

- the model of the European Foundation of the Quality Management (EFQM). The national and industry model of EFQM was recognized the model of competition of Russian educational supervision, Russian education «Systems of ensuring quality of training of specialists»;
- standards for quality management ISO 9000 (the latest version of the standard — ISO 9001:2008; Russian counterpart — ISO 9001:2008);
- «standards and guidelines for quality assurance of higher education in the European region,» developed by the European Network (Association) Quality Assurance (ENQA) in higher education.

The principles on which these documents and models are constructed, have much in common and complement each other. The difference is in completeness and depth of coverage of all processes of higher education institution. «Continuous improvement» activity is the main requirement, ideology of all above-mentioned

models. And its base is made by 8 principles of general quality management (TQM). Consciously demanded, weighed and thought-over intra high school quality system can become a well-tried and effective mean of achievement of main objectives of modern higher education – compliances to public, social and personal expectations or, using the language of the standards EFQM, ISO, ENQA, the requirements of the consumer.

In August-September, 2009 the preparation of QMS MSPU for certification was finished, and in October the independent expert certified appraisal of QMS MSPU on compliance to ISO 9001:2008 international standard requirements was held. Educational process of University was included in area of certification.

The certification was carried out by Association on certification «the Russian Register» (St. Petersburg) (further – RR).

The association on certification «the Russian Register» is the member of the International network of certification of IQNet; in Russia it is leading body on certifications of control systems by quality, trust to which rendered over 3000 enterprises, including universities of the countries of the near and far abroad (Germany, the USA, the Baltic States, Poland, Holland, Austria).

The management «Russian Register» made the decision on recognition of QMS MSPU of the last version of the ISO 9001:2008 international standard corresponding to requirements.

In November, 2009 the certificates of RR and the international certified IQNet network and compliance signs were handed over to the rector of MSPU, the academician of the Russian Academy of Sciences and Russian Academy of Education V.L.Matrosov. MSPU was officially registered on a site of this international organization. Then together with MPSU 59 Russian universities were partners of IQNet. Today the number is more than 90.

There are certain quality assurance systems developed and introduced in Moscow State Pedagogical University, that meet ISO 9001 and guarantee that the mechanisms and policies for aligning academic programmes with national qualifications frameworks or Dublin Descriptors are in place and clearly articulated. This part of the self-evaluation report represents the evidence for meeting the expectations as they were formulated within the WP4 of Tempus ALIGN project (10 criteria).

11. Resume

The programme «Management of research, development, innovation in the university» meets international and national quality standards of education and allows students to create the necessary competences, united with the pan-european space.

The program was developed in accordance with the local normative legal act of the University «Regulations on the educational program of higher education - undergraduate, program specialties, master's program» (the approved Order of the rector of 02.06.2016 No 592).

Qualification, obtained as the result of the programme are clearly defined and corresponds to the level of the National framework of qualifications, European qualifications framework and Dublin descriptors. Learning outcomes for the program clearly identified and built on the basis of professional standards.

The program aims to support the personal growth of students, development of student employment system, creation of a broad base of current knowledge. The programme focuses on strengthening the relationship between research, learning and teaching given the global trends of education development and international standards in higher education.