APPROVED
by order of the Rector
dated December 20, 2022 No. 1976 adm

by the decision of the Academic Council
of Saint Petersburg Mining University
dated November 25, 2022 (The Minutes No. 12)

REGULATIONS GOVERNING POSTGRADUATE (PHD) PROGRAMMES OF SAINT PETERSBURG MINING UNIVERSITY

1. General provisions

1.1. These Regulations define the basic requirements for all postgraduate (PhD) programmes and postgraduate (PhD) students of Saint Petersburg Mining University (hereinafter referred to as the Mining University, the University).

1.2. The legislative framework:

- Federal Law No. 273-FZ of December 29, 2012 on Education in the Russian Federation;
- Decree of the Government of the Russian Federation dated November 30, 2021 No. 2122 on approval of the Regulations on postgraduate (PhD) programmes for academic, research and teaching staff;
- Order of the Ministry of Science and Higher Education of the Russian Federation dated October 20, 2021 No. 951 on approval of federal state requirements for the structure of postgraduate (PhD) programmes for academic, research and teaching staff, the conditions for their implementation, the timing of the development of these programmes, taking into account various forms of education, educational technologies and the characteristics of certain categories of PhD students";
- Charter and other local regulations of the University.

1.3. The target of postgraduate studies is training highly qualified academic, research and teaching staff.

1.4. Postgraduate studies mission:

1.4.1. Training academic, research and teaching staff capable of conducting high quality research and teaching activities, who defended a dissertation for the degree of Candidate of Sciences (research competency) and completed the training programme for obtaining the Teacher and Researcher qualification (teaching competency).
Training academic, research and teaching staff capable of conducting high quality research, who defended a dissertation for the degree of Candidate of Sciences and was awarded a qualification of Researcher (research competency).

1.5. Attendance Mode:

The postgraduate (PhD) programmes are taught full-time according to an individual work plan approved by the University, taking into account the field of study of the PhD student, the major and the object of study.

1.6. Study Period:

It is determined by an individual work plan, taking into account the field of study:

- up to 4 (four) years if scientific experiments are planned;
- up to 3 (three) years if scientific experiments are not planned.

2. Requirements for admission to the postgraduate (PhD) programme

2.1. Applicants are admitted to the postgraduate (PhD) programme on a competitive basis (competitive admission). Applications for admission shall include:

2.1.1. The original of the applicant's diploma of higher education (academic record of your previous education) – a specialist diploma (with the qualification of engineer) or a master's degree.

2.1.2. The study of the research object already conducted by an applicant in the format established by the University (in paper and electronic format) 30 days before the deadline set by the Admissions Committee.

2.1.3. Scientific achievements.

2.1.4. Recommendation letter of an organization (university) and/or a researcher (professor) according to the field of study of the proposed research.

2.2. Competitive admission for postgraduate studies shall include:

2.2.1. Presentation and defence of the conducted research before the Expert Council of the University for the Research Staff Training.

2.2.2. Passing the entrance examinations in the field of study set by the University.

2.3. The postgraduate program is implemented on a full-time basis.

3. Postgraduate (PhD) programme curriculum

3.1. Methodological approach.

The postgraduate (PhD) programme is taught according to an individual work plan of a PhD student, cosidering:

- individual level of knowledge, skills and competencies of a PhD student;
- the technical plan of theoretical and experimental research proposed by the research supervisor of the PhD student;
- teaching and learning materials developed and approved by the university and aimed at mastering:

- theoretical knowledge;
- practical application of theoretical knowledge;
- experience in applying those acquired skills in practice.

3.2. The content of a postgraduate (PhD) programme in terms of teaching competency:

3.2.1. The postgraduate (PhD) programme is designed to enable a PhD student to develop teaching competency, become a teacher/higher education lecturer, and create a well-rounded individual who is ready for teaching based on their knowledge, skills and experience taught on a postgraduate (PhD) programme. The competency of the future higher education lecturer is developed on the basis of:

 professional competency, that is the ability and readiness for teaching, which allows successfully solving pedagogical problems based on the necessary set of knowledge, skills, abilities and experience;

 general cultural competence, that is the level of education sufficient for self-education and self-actualization as a teacher (higher education lecturer);

 social competence is the ability to interact socially and to actively establish social relationships with other people. This competence is part of the system of human values, the ability of the society to function and the role of a person in this structure.

3.2.2. The curriculum of the postgraduate (PhD) programme in terms of teaching competency is aimed at solving the following specific tasks:

 at the first stage the PhD student is expected to realize his/her incompetency in teaching;

 at the second stage a conscious need to improve their professional teaching competency is developed, the teaching competency model is studied; the results of the learners' diagnostics and test results are analyzed; the training sessions of other lecturers are attended; effective teaching practice is demonstrated to a professional tutor;

 development of conscious teaching competency based on acquired knowledge and skills;

 development of conscious competency which enables to automatically perform actions fixed through practical skills, repetition and constant introspection of activity.

3.2.3. The curriculum of the programme in the field of teaching competency includes:

 a set of disciplines in the field of teaching, technology, organization of the educational process, including lectures, practical classes, self-study;

 teaching skills – up to 100 (one hundred) hours;

 teaching practice (experience) – not less than 300 (three hundred) hours as an assistant trainee.

3.2.4. The results of determining the level of teaching competency:

 increasing theoretical knowledge – confirmed by interim assessment for the entire course of academic disciplines and examination;

 the level of proficiency in teaching skills is graded assessment based on the results of the appraisal by a tutor - teaching supervisor and the educational and methodological council of the department, the certificate of *Assistant Trainee (granting the right to conduct classes under the supervision of the tutor)* is awarded;

 the level of teaching experience is assessed; the certificate of *Professional Teacher (Higher Education Lecturer)* is awarded.

The final recognition of the teaching competency of a PhD student is the final examination by the subject teaching board of the University.

3.3. The content of a postgraduate (PhD) programme in terms of research competency.

3.3.1. The postgraduate (PhD) programme in terms of research competency is designed to enable a PhD student to become a researcher able and willing to put into practice basic approaches to the order of planning, organizing and conducting fundamental and applied research, R&D work and introducing innovations through the use of acquired scientific knowledge.

3.3.2. The curriculum of the postgraduate (PhD) programme in terms of research competency includes:

 a set of disciplines in the field of fundamental research competency on *the Philosophy of Science* (methodology of scientific research; research articles; patenting and protection of intellectual property; scientific communication; metrology and quality of research; organization of experiments; reliability of findings; organization and management of research results; engineering support for innovative projects – lectures, practical classes, self-study);

 practical research (*experience*) in order to perform experimental research to obtain a reliable result in the field of new knowledge – at least 500 (*five hundred*) hours for a 3-year course and at least 900 (*nine hundred*) hours for a 4-year course of postgraduate study;

 research internships in the flagship research branches of Public Companies for a total period of at least 50 (*fifty*) hours;

 international research internships under the programme on *International Practice Of Organizing Research* in the flagship centres of leading overseas universities – a PhD student should have at least 1 (*one*) such internship.

3.3.3. The key research competency indicator is the public defence of a dissertation for the degree of Candidate of Sciences with the award of the degree of Candidate of Sciences (*Doctor of Philosophy*) within the terms of postgraduate (PhD) programme. The control indicators are listed below:

3.3.3.1. The outcomes of the theoretical course and independent research are:

- examination in the disciplines of the programme;
- a scientific review in the given field with the definition of the object of study; a presentation (*using at least 50 sources*) with slides (*until the end of 1st semester*);
- defence of the presentation in order to determine the object of research at the Expert Council for Research with awarding the title of *PhD Researcher* at the end of the 1st semester.

3.3.3.2. The outcomes of the laboratory research are:

- obtaining theoretical or laboratory research findings according to the research planning methodology, choosing the technology for conducting experiments and generating the motivation for developing quantitative indicators and obtaining empirical results;
- writing and publishing a fundamental article (*together with the research supervisor*) in a cited academic journal – no later than the 2nd semester;
- obtaining *the Philosophy of Science* certificate verifying the fundamental research competency after receiving at least 3 citations of a published fundamental article - no later than the 3nd semester (*4th semester*);
- preparing a dissertation (*based on the empirical results obtained by the PhD student on theoretical and experimental research and the basic mathematical models*) for the degree of Candidate of Sciences (*Doctor of Philosophy*). The final article in the cited academic journal is to be published no later than 8 months before the end of the programme;
- public defence of the dissertation for the degree of Candidate of Sciences (*Doctor of Philosophy*) with the following general requirements to be fulfilled within 2 weeks before the end of postgraduate (PhD) programme: at least 2 articles published in cited academic journals with an average number of citations not fewer than 3 in the given field of study; the act of the findings implementation (the act of implementation confirms that the research carried out by the PhD student can and should be applied in practice).

4. Supervising the training of academic, research and teaching staff in the postgraduate (PhD) programme

4.1. The formative assessment of PhD candidates' progress, the interim assessment of PhD students, and their final assessment are all part of the quality control of finishing the postgraduate (PhD) programme. It is governed by the Mining University's defined Procedures for conducting formative, interim, and final assessments of PhD candidates.

4.2. Every month, the supervisor carries out formative assessment of PhD student’s progress by stages of their research activity.

4.3. Interim assessment takes place once per semester at the end of it – completion of the individual study plan is assessed from the point of view of developing teaching and research competencies (*theoretical knowledge, practical skills and experience*). The PhD student is assessed by the Council for the training of academic and research staff, taking into account the performance review and the recommendation letter of the research supervisor and the fulfilled requirements from the Section 3 of these Regulations.

4.4. Candidacy examinations results refer to the assessment of the learning outcomes for the disciplines (*areas of study*), carried out as part of interim assessment.

4.5. Failure to meet the threshold requirements determined by an individual study plan of a PhD student is grounds for terminating the contract with the PhD student.

4.6. The final assessment for postgraduate (PhD) programmes includes:

- the final examination for the teaching competency;
- defence of a dissertation for the degree of Candidate of Sciences.

5. THE RELATIONSHIP BETWEEN THE POSTGRADUATE (PHD) STUDENT AND THE UNIVERSITY

5.1. The *Postgraduate (PhD) Student Agreement* (hereinafter referred to as *the Agreement*) is the primary document governing the relationship between a PhD student and the University. The Agreement outlines all of the parties' rights and obligations, is approved by the Rector, and stipulates that an Appendix to the Agreement that has been properly executed shall be legally binding.

5.2. Rights and obligations of the parties:

5.2.1. Rights and obligations of a PhD student:

- compliance with internal regulations;
- implementation of an individual curriculum in the field of teaching and research competencies;
- taking part in the public life of the University;
- PhD student's benefits;
- participating in professional teaching and research activities as a postgraduate researcher and a trainee assistant;
- access to the University's infrastructure;
- other rights and obligations stipulated by the Russian Federation law, the Mining University's charter, and other local regulations.

5.2.2. Rights and obligations of the University:

5.2.2.1. A competitive environment based on an appraisal of the PhD student’s social activities and scientific leadership in order to strengthen the importance of the

performance review and the recommendation letter given to graduates with a master's or a specialist (five-year) degree when applying for postgraduate (PhD) programme.

Consider this type of activity as a conscious work of departments on systemic personnel policy.

5.2.2.2. The development of an individual (personalized) study plan for PhD students, the establishment of a competitive environment for PhD students, and the establishment of an atmosphere of trust.

5.2.2.3. The development of the best system for managing all aspects of postgraduate (PhD) programme is based on a continuous growth of the reputation and expertise of the research and teaching supervisors and an effort to integrate their responsibilities.

5.2.2.4. According to these Regulations, the University's primary mission is to ensure that PhD students are able to conduct classes under the supervision of the department head and the leading lecturer, who serves as the PhD student's teaching supervisor, by providing them with the necessary practical knowledge and experience *(teaching tutor)*.

5.2.2.5. Systematic work on creating an environment for PhD students that is goal-oriented, educational, conducive to research, and social, includes:

- development of laboratory facilities for the forming small technological research chains for the tasks of the research objects of PhD students;
- development of the scientific potential of research centres: full-time researchers; trust and access to specialized laboratories, development of field test sites;
- development of industry-specific international research centres (*in public companies*) based on the world's leading centres for short-term internships and specialized research;
- creating team spirit for PhD students on the basis of shared educational and research centres, training sports centres;
- supplying PhD students with university uniforms;
- social protection (*meals once a day, scholarships*);
- scientific internships and academic and scientific events in the area of study and scientific research;
- providing comfortable accomodation (*two people in one residential block*) with partial compensation of expenses.

5.3. The total amount of University costs per student:

- from 9 (nine) million rubles for three years of study;
- from 10 (ten) million rubles for four years of study.

6. POSTGRADUATE (PHD) PROGRAMME COMPLETION DIPLOMA (PHD CANDIDATE DIPLOMA) THAT COMPLIES WITH RUSSIAN AND INTERNATIONAL STANDARDS

PhD students who successfully complete the postgraduate (PhD) programme are awarded a PhD candidate diploma which indicates their levels of teaching and (or) research competencies:

6.1. If the PhD student satisfies all of the final requirements for:

- the teaching competency – confirmed by a positive decision by the subject teaching board of the University;
- the research competency – confirmed by the Candidate of Sciences (Doctor of Philosophy) Diploma.

The PhD candidate diploma in this case will indicate the right to receive a Diploma of professional qualification *Teacher and Researcher* with a diploma supplement that meets international requirements issued by the Qualification Commission of the University.

6.2. If a postgraduate (PhD) programme is successfully completed without a dissertation defence during the programme's term of study, and if the subject teaching board of the University rules in favor of the postgraduate, the following will be noted on the diploma:

- absence of research competency;
- the right to apply to the Qualification Commission for the Diploma of *Teacher and Researcher* on the condition a dissertation for the degree of Candidate of Sciences (*Doctor of Philosophy*) successfully defended within one year after completing postgraduate study.

6.3. When a PhD student successfully completes a postgraduate (PhD) programme and the subject teaching board of the University decides that they have no teaching competency, a postgraduate (PhD) programme completion diploma is issued, stating:

- absence of teaching competency;
- eligibility for the Diploma of Researcher.

7. THE QUALIFICATIONS AND THE DIPLOMAS OF TEACHER AND RESEARCHER with diploma supplements to them meeting international requirements are awarded by the Qualification Commission, approved by the order of the rector, based on:

- Postgraduate (PhD) Programme Completion Diploma (PhD candidate Diploma);
- Candidate of Science (*Doctor of Philosophy*) Diploma.

8. THE PRESENT REQUIREMENTS FOR POSTGRADUATE (PHD) PROGRAMMES TAKE INTO ACCOUNT:

 the requirements of the Mining University, its academic reputation, the autonomy granted to the University in educational and research activities and the requirements of the labour market;

 requirements established by the legislation of the Russian Federation;

 established international norms and rules defining the requirements for the academic, research and teaching staff training.