

Ministry of Health of the Russian Federation



**Federal State Budgetary Educational Institution of Higher Education
“North-Western State Medical University named after I.I. Mechnikov”
under the Ministry of Health of the Russian Federation**

(FSBEI HE NWSMU named after I.I. Mechnikov under the Ministry of Health
of the Russian Federation)

PASSED by
Academic Board
of FSBEI HE NWSMU
named after I.I. Mechnikov under
the Ministry of Health of the Russian
Federation
November 30, 2017
Minutes No. 11

ADOPTED
Acting Rector
FSBEI HE NWSMU
named after I.I. Mechnikov
under the Ministry of Health
of the Russian Federation

/signature/ O.G. Khurtsilava
November 30, 2017

APPROVED

At the meeting of the Council of Students of
FSBEI HE NWSMU named after
I.I. Mechnikov under the Ministry of Health
of the Russian Federation
Minutes No. 17 dated November 02, 2017

/signature/ Sh.Sh. Kudlakhmedov
November 02, 2017

Seal:
MINISTRY OF HEALTH OF THE RUSSIAN
FEDERATION
FEDERAL STATE BUDGETARY EDUCATIONAL
INSTITUTION OF HIGHER EDUCATION
NORTH-WESTERN STATE MEDICAL UNIVERSITY
NAMED AFTER I.I. MECHNIKOV further illegible

REGULATIONS

**on the research work of students in higher education programs – bachelor's degree,
specialist degree and master's degree programs at FSBEI HE NWSMU named after I.I.
Mechnikov under the Ministry of Health of the Russian Federation**

1. General Provisions

1.1. Regulations on the research work of students in higher education programs – bachelor's degree, specialist degree and master's degree programs at FSBEI HE NWSMU named after I.I. Mechnikov under the Ministry of Health of the Russian Federation (hereinafter referred to as the Regulations) regulates the organization and conduct of research work of students under bachelor's degree, specialist's degree and master's degree programs (hereinafter referred to as the R&D of students) at FSBEI HE NWSMU named after I.I. Mechnikov under the Ministry of Health of the Russian Federation (hereinafter referred to as the University) in accordance with the requirements for the level of preparation of students in bachelor's degree, specialist's degree and master's degree programs (hereinafter referred to as students) specified in the federal state educational standards of higher education (hereinafter referred to as the FSES).

1.2. These Regulations were developed in accordance with

- Federal Law No. 273-FZ dd. 29.12.2012 “On Education in the Russian Federation”,
- Procedure for the organization and implementation of educational activities in higher education academic programs – bachelor’s degree, specialist's degree, master's degree programs approved by order of the Ministry of Education and Science of the Russian Federation No. 301 dd. 05.04.2017;
- Federal State Educational Standards for Higher Education (hereinafter referred to as the FSES HE);
- Charter of the University;
- Local regulations of the University.

1.3. The R&D of the student is a mandatory section of the basic professional degree programs of higher education – the unit “Practical training, including research and development work (R&D)” and is aimed at the comprehensive formation of general cultural, general professional and professional competencies in accordance with the requirements of FSES HE.

2. Goals and objectives of R&D

2.1. The goal of the organization and development of R&D of students at the University is to increase their level of training by mastering in the process of carrying out R&D of methods, techniques and skills for performing research work, developing creative abilities, mastering the methodology of scientific activity to use the acquired skills and knowledge in the analysis and solution of professional problems and for the successful use of scientific knowledge in practical activities.

2.2. The main objectives of R&D of students:

2.2.1. Development of skills of research work in the professional field and in-depth and creative assimilation of educational material of the basic academic program in the field of study (area of specialization).

2.2.2. Mastering the methodology and methods of scientific activity, forming a system of professional knowledge about the specifics of scientific knowledge, criteria of scientific knowledge and scientific methods of cognition.

2.2.3. Development of skills for summarization, review and analysis of scientific information sources, generalization and critical assessment of the results of scientific-theoretical and empirical research.

2.2.4. Development of skills for planning theoretical and experimental studies taking into account the specifics of a certain industry on the basis of general methodological and methodical principles of research.

2.2.5. Development of skills of practical implementation of theoretical and pilot studies, on the basis of knowledge, abilities, skills and experience acquired in educational process.

2.2.6. Development of skills for qualitative and quantitative analysis of research results, their generalization and critical assessment in the light of existing theoretical approaches and modern empirical study.

2.2.7. Development of skills of preparation and presentation of the results of scientific work in oral (reports, presentations, speeches) and written (abstracts of scientific works, library-research papers, scientific and research analytical reviews, end-of-year papers, etc.) form.

2.2.8. Acquisition of experience in scientific teams and familiarization with the methods of organizing scientific work.

2.2.9. Direct participation in solving scientific and scientific-practical problems in accordance with the main areas of research activities of the department.

3. Main forms of R&D

3.1. R&D of students is divided into research work planned in the higher education

academic program (hereinafter referred to as HE AP) for education of bachelors, specialists or masters and performed in addition to it.

3.2 *The planned R&D of students*, which is part of the educational process, can be carried out in the following forms:

3.2.1. Section of the educational program of the appropriate level.

3.2.2. Individual discipline provided by the curriculum.

3.2.3. The component of the learning session provided by the curricula and programs: presentation at seminars with reports on monographic literature and scientific articles; participation in the discussion of reports, library-research papers, discussion articles; preparation of library-research papers, fulfilment of tasks and end-of-year papers (projects) of a research nature, etc.

3.2.4. Individual task of research nature, for example, in the course of individual work or on-the-job practical training.

3.2.5. Section of end-of-year paper (end-of-year paper project) (depending on the level of HE AP may include elements of R&D or be completely based on scientific research).

3.2.6. Other forms of work at the discretion of departments.

3.3. *The R&D performed in addition to the HE AP* can be implemented in the following forms:

3.3.1. Participation in the performance of research work carried out by departments, teachers, scientists.

3.3.2. Participation in the work of scientific societies, research task forces, scientific interest groups, discussion clubs, seminars.

3.3.3. Participation in contractual and state budget research works, grants.

3.3.4. Participation in competitions, quizzes, olympiads.

3.3.5. Other forms of work at the discretion of faculties and departments.

4. Content and organization of R&D, which is a section of the academic program of the appropriate level

4.1. Content of R&D, which is a section of the HE AP of the corresponding level.

4.1.1. The student's R&D is carried out in order to collect, analyze and generalize scientific material, develop scientific ideas for the preparation of end-of-year papers (works), obtain skills of independent research work, and practical participation in the real R&D of the University.

4.1.2. The results of R&D can be presented in the form of a report, library-research paper, publication of various levels, report on the research made, etc. The main requirements for documentation of the R&D results of students (structure and content), as well as an example of the title page of R&D are presented in Appendices 1 and 2, respectively.

4.1.3. In accordance with the requirements contained in the FSES HE, the student's R&D program is developed by the departments of the University, considered at a meeting of the methodological council of the faculty and approved by the Vice-Rector for Academic Affairs.

4.1.4. When implementing the R&D program, students shall be given the opportunity to:

conduct research in the research laboratories of the University or in other institutions in accordance with the R&D plan of the unit or on the topic of R&D of another institution agreed with the University;

study special literature and other scientific information on the achievements in domestic and foreign science in the relevant field of knowledge;

participate in research works of University divisions, including on contractual terms;

receive advice and/or support in the form of scientific guidance from the academic and teaching staff;

have access to general scientific and specialized sources of information, including through the Internet;

use the University's software, information and technical resources in accordance with the work plan;

participate in research seminars and scientific conferences, scientific schools on their own and related topics;

collect, process, analyze and systematize scientific information on the topic (task);

prepare reports (report sections) on the topic or its section (stage, task); participate in writing articles in scientific journals on R&D; make a presentation at research seminars, conferences using modern software, visualization tools.

4.1.5. Departments of the University may provide for the following stages of implementation and control of R&D of students:

familiarization with the topic of research work in the area and selection of the topic of research;

rationale for the study topic;

drawing up an individual research plan for students (see example in Appendix 3);

preparation of reports on the selected topic and their public presentation;

writing library-research papers on a selected topic;

performing the experiment;

processing of experimental results;

public defense of the work performed.

4.1.6. At the intermediate stages of implementation and upon completion of R&D of students, the educational units of the University should discuss the work performed and being performed with the involvement, if possible, of employers, allowing to assess the level of acquired knowledge, skills and competencies of students, including competencies related to the formation of a professional worldview and the determination of the cultural context.

4.1.7. The scope and specific content of all stages of R&D of students, which is a section of HE AP of the corresponding level, are determined by the student's R&D program.

4.1.8. The student's R&D program shall provide for:

content and terms of individual tasks for R&D performance by students;

procedure and terms for preparation and defense of R&D by students;

form of qualification based on the student's R&D (pass/fail exam or differentiated grade).

4.1.9. The student's R&D program shall include the following sections:

R&D goals;

R&D objectives;

place of R&D in the structure of HE AP for education of a bachelor (specialist, master);

venue and time of R&D;

competencies of the student formed as a result of R&D;

structure and content of R&D;

professionally oriented and research technologies used in the implementation of R&D;

forms of current and midterm assessment of R&D performance;

training, methodical and informational support of R&D;

material and technical support of R&D.

4.1.10. Appendices to the student's R&D program may contain methodological instructions on the organization of individual work of students during the R&D, report form and other materials at the discretion of the department.

4.2. Organization of R&D of the student is a section of HE AP of the corresponding level.

4.2.1. R&D can be carried out by students in the structural divisions of the University, as well as at enterprises, institutions and organizations with the necessary personnel and scientific potential.

4.2.2. R&D carried out by students at enterprises, institutions and organizations is arranged on the basis of agreements on practical training, on cooperation and other contracts

providing for the possibility of such work concluded between the University and the enterprise, institution or organization.

4.2.3. The terms of the student's R&D in accordance with the curriculum and academic schedule for the corresponding academic year.

4.2.4. For all categories of students, the R&D is mandatory, if such a section is provided for by the curriculum. Based on the results of R&D, students submit to the department the materials provided for by the current and midterm assessment, with their subsequent assessment.

4.2.5. R&D can be carried out by students both continuously and by alternating with theoretical classes by days (weeks), provided that the relationship between R&D content and theoretical training is ensured.

4.2.6. The deans of the faculties, together with the heads of departments, are responsible for organizing and conducting R&D of students; before the start of R&D, they prepare orders on the topics of R&D of the student and the appointment of student's R&D coordinators.

4.2.7. Lead teachers of the corresponding departments are appointed student's R&D coordinators.

4.2.8. Student's R&D coordinator shall:

develop the subject matter of individual tasks and provide methodological assistance to students when performing them;

take part in the work of the commission on R&D assessment and in the preparation of student conferences based on the results of R&D;

review the reports of students on R&D, give feedback on their work and provide the head of the department with a written report on the implementation of the R&D section of the student along with comments and proposals on the organization of R&D of students.

4.2.9. The academic load of teachers who coordinate the R&D of students is determined by the standards of time of study work in force at the University.

4.2.10. The form of control over the student's R&D is a pass/fail test or a test with assignment of a grade (established by the curriculum and program of the R&D taking into account the requirements of FSES HE). The student's R&D grade or pass/fail test outcome is equal to grades (pass/fail test outcome) on theoretical training and is taken into account when summing up the results of the overall performance of the students.

4.2.11. No later than ten days after completion of R&D or its relevant stage, the student passes a pass/fail test (test with assignment of a grade) at the commission appointed by the head of the department. The commission includes the head of the department, the student's R&D coordinator, lead teachers of the department.

4.2.12. The results of R&D of the student shall be mandatory discussed at meetings of the academic boards of faculties, at scientific and practical conferences.

4.2.13. Students who have not completed the R&D program for a good reason shall re-perform it, in their free time from study.

4.2.14. Students who have not completed the R&D program without good reason or have received an unsatisfactory grade are expelled from the University as having academic arrear in accordance with the procedure provided for by the University Charter and other local acts of the University.

5. Organizational structure of the student's R&D

5.1. The main functions of the bodies, officials and divisions of the University responsible for the student's R&D are the methodological and direct management of the R&D, development of scientific topics, selection of scientific work supervisors, preparation and conduct of organizational and mass events carried out within the framework of the current or planned R&D at departments, faculties and at the University.

5.2. Methodological assistance to R&D students, organization of R&D activities of students in accordance with HE AP and FSES HE are organized by the University departments according to the approved work programs of education courses, disciplines (modules), programs of practical training, programs of R&D of students, programs of state final examination of graduates.

5.3. The Vice-Rector for Academic Affairs is directly responsible for the functioning of the R&D system of students at the University. He/she performs the functions of organizing, maintaining and developing the R&D system of students at the University.

5.4. The Vice-Rector for Academic Affairs manages the work of the deans of faculties and heads of departments in terms of the forms and types of R&D of students included in the curricula.

5.5. Deans of faculties, heads of departments and teachers of the University ensure that students perform forms and types of R&D included in the educational process in accordance with HE AP, and in terms of students' R&D forms, performed in addition to HE AP, rely on the recommendations of the methodological councils of faculties and on the decisions of departments.

Main requirements to the structure and content of research and development work

1. Requirements for form of presentation of R&D results by students

The form of presentation of R&D results shall have the following structure:

- title page;
- table of contents;
- introduction;
- the main part;
- conclusion;
- reference list;
- applications (if any).

The table of contents includes the names of all sections of the work, indicating the pages of the beginning of each section.

In the introduction, the author justifies the relevance of the R&D topic, briefly characterizing the current state of the scientific problem (issue) covered by the work, determines the goal of the research, formulates the objectives to be achieved to meet the set goal, chooses methods of research, determines the degree of development of the topic, substantiates the R&D structure, lists the main conclusions reached by the student during the research.

The introduction shall contain:

The purpose of the study conducted as part of R&D;

Research objectives that have been consistently addressed to achieve the goal;

Scientific novelty of the study;

Theoretical and practical significance of the study;

Implementation of study results.

Research methodology and methods;

Scope and structure of work.

The main part of the R&D includes at least three chapters (sections) in accordance with the presentation logic. They outline the solution to the set problems, consider the methodological, theoretical and analytical aspects of the problem being studied, note the degree of development of individual issues, analyze the current state of the problem, formulate recommendations with the justification of the effectiveness of individual proposals. At the end of each chapter, conclusions are drawn.

The first chapter shall be devoted to theoretical issues covered in the R&D. The first chapter is formed on the basis of a study of available domestic and foreign scientific and special literature on the topic under investigation, as well as legislative regulatory materials.

It contains:

- description of the object and subject of research, various theoretical concepts, views, accepted concepts and their classification, as well as the degree of elaboration of the problem in Russia (if necessary – abroad);
- description of the conceptual framework(including author's definitions) and (or) critical assessment of existing concepts and their clarification;
- description of available tools and methods for solving the problem under consideration.

The second chapter is formed on the basis of an analysis of the specific material collected during the R&D work of the student on the selected topic; statistical data, as well as the results of testing the individual algorithm (author's methodology) to solve the problem under consideration.

It contains:

- description of the identified laws and trends in the development of the object and subject of the study;
- on the basis of the conducted studies and analysis, the main indicators of the functioning and development of the object and subject of the study are assessed;

For the purpose of analysis, the analytical tables, calculations, formulas, diagrams, charts, and graphs are used.

The third chapter outlines the author's recommendations and suggestions received during the study. In this chapter, based on research conducted:

- the results of testing the individual algorithm (author's methodology) to solve the problem under consideration are analyzed;
- specific practical recommendations and proposals for improving the studied phenomena and processes are formulated;
- ways to solve the questionable matter are developed and the author's scientific contribution to its solution is determined.

The conclusion as a separate section of the R&D provides a summary of the main analytical conclusions of the study and a description of the results obtained during it. There shouldn't be too many conclusions, typically, the number of conclusions is determined by the number of tasks assigned, since each task should be reflected in the conclusions in a certain way. The final part shall also contain a generalized final assessment of the work done.

- general conclusions on the results of the work;
- assessment of the reliability of the results obtained and comparison with similar results of domestic and foreign works;
- suggestions on the use of the results of work done, practicability of implementing the developed proposals;
- possible directions for further scientific research of the problem.

The final part include generalizations, general conclusions, specific proposals and recommendations. In general, the conclusions and results of the study presented in the final part shall consistently demonstrate the solution to all the problems set by the authors in the introduction section, which makes it possible to assess the thoroughness and completeness of the study.

The reference list is a list of the following items used during the research of the selected topic compiled in accordance with the established rules: laws and delegated legislation, educational and scientific literature, periodicals, materials of legal practice. It is recommended to submit one reference list for the work as a whole. In this case, each source is mentioned once in the list, regardless of how often it is referred to in the text of the work. References must include sources in foreign languages. The reference list shall include at least 20 items.

Plagiarism in the R&D is prohibited. The allowed matching content percentage is 30 %. When plagiarism is detected, the work reviews are considered negative, and an unsatisfactory rating is assigned.

2. Scope and execution of R&D

The results of R&D can be presented in the form of a report, library-research paper, publication of various levels, report on the research made. The scope of R&D results depends on the type in which the study results are presented (report, library-research paper, publication, study report). The maximum allowable volume is 30 pages of A4 format (296x210 mm).

The size of the fields should be: left – 30 mm, right – 10 mm, upper and lower – 20 mm each.

The text of the R&D should be prepared in the Microsoft Word editor. Font – Times New Roman, font size – 14, line spacing – 1.5, paragraph indentation 1.25 cm, alignment in width. The printer font must be clear, black. The alignment of the headers – centered. Alignment of the main text – by the width of the field.

The first sheet of R&D is the title page. Other sheets shall have end-to-end numbering in Arabic numerals, and the page number shall not be put on the cover page.

Footnotes must be page-by-page numbered. Design of R&D shall comply with GOST (GOST 2.105-95, GOST 7.32-2001, GOST 7.1-2003).

The title page is drawn up according to the example. It shall indicate:

- name of the university, department providing scientific supervision of the work;
- title of the topic;
- full name and personal signature of the student;
- surname, first name, patronymic, academic degree, position and personal signature of the supervisor;
- city, year of work preparation.

Conventional letters, images or signs shall comply with those adopted in the applicable law or state standards.

Digital material, as a rule, is executed in the form of tables. The table title shall reflect its contents, be precise and concise. The title shall be centered above the table. Illustrations (graphs, diagrams), except for the illustrations of the appendices, shall be numbered with Arabic numerals by end-to-end numbering, for example: "Figure 1". The title shall be placed in the center under the picture.

If specific terminology is used in the work, then a list of accepted terms with corresponding explanations shall be placed at the end of the work. If a special system of abbreviations of words or names is adopted in the work, then it shall contain a list of accepted abbreviations, which shall be placed after the appendices before the list of terms.

Appendices shall be executed as a continuation of the R&D on its subsequent pages, appendices shall be placed in the order in which links appear on them in the text of the work. Each appendix shall start with a new page and have an informative header printed in capital letters. In the upper right corner above the heading, the word "Appendix" shall be printed in capital letters. If there are more than one appendix, they shall be numbered with Arabic numerals of ordinal numbering.

Sources used in this work without citation are referenced directly in the text. At the end of the sentence, the ordinal number of the source according to the list is specified, highlighted by square brackets, for example: [2], [5], [14], etc.

On the last page of the R&D work, the author acknowledges the self-consistency of study by putting his/her own signature.

The final version of the R&D shall be printed, signed by the author, supervisor (consultants, if any) and the head of the department at which the work was carried out.

Example of the title page of research work

FEDERAL STATE BUDGETARY EDUCATIONAL INSTITUTION OF HIGHER
EDUCATION
“NORTH-WESTERN STATE MEDICAL UNIVERSITY
NAMED AFTER I.I. MECHNIKOV”
UNDER THE MINISTRY OF HEALTH OF THE RUSSIAN FEDERATION

As manuscript

Last Name Patronymic

RESEARCH WORK OF THE STUDENT

faculty _____

Area of specialization (field of study) _____

On the topic _____

Executed student of the group _____
(full name)

_____ (group number) _____ (signature, date)

Department _____

Coordinator _____

(academic degree, academic title, position, full name)

_____ (signature, date)

Assessment _____

St. Petersburg

20__

Example of individual R&D plan

Ministry of Health of the Russian Federation
Federal State Budgetary Educational Institution of Higher Education
“North-Western State Medical University named after I.I. Mechnikov”

(FSBEI HE NWSMU named after I.I. Mechnikov under the Ministry of Health of the Russian Federation)

Department _____

Approved by
 _____, 20__
 Head of department _____

Individual plan of research work of the student

 (last name, first name, patronymic)

1. **Topic of research work** _____
2. **Deadline for delivery of the completed work by the student** _____, 20__
3. **R&D Schedule**

Actions	Terms of performance	Progress mark
1. Selection of literature, its study and processing. Construction of bibliographies on the main sources		
2. Development and submission of study materials for review		
3. Accumulation, systematization and analysis of practical materials		
4. Adaptation (rework) in accordance with comments and submission to the department		
5. Preparation of scientific report abstracts		
6. Finalization of work		
7. Presentation of R&D at the Department		

Student _____ (signature)

Coordinator _____ (signature)