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**REGULATIONS**  
**on research work and commercialization of scientific**  
**developments**  
**IRD-ZU-12-01**

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## 1 SCOPE

1.1 These Regulations are the main document that define the planning procedure and general requirements for research work performed at the Zhetysu University named after I. Zhansugurov (hereinafter ZU).

1.2 These Regulations contain requirements for conducting research and commercialization of the results of scientific and technical activities, are applied by all departments of Zhetysu university named after I. Zhansugurov and are mandatory for all employees of the university.

## 2 NORMATIVE REFERENCES

These Regulations use references to the following normative documents:

Law of the Republic of Kazakhstan dated 27.07.2007 № 319-III	On Education
Law of the Republic of Kazakhstan dated 18.02.2011 № 407 IV	On Science
Law of the Republic of Kazakhstan dated 31.10.2015 № 381-V	The commercialization of the results of scientific and technical activities
Order of the Minister of Education and Science of the Republic of Kazakhstan dated 31.10.2018 № 604	On the approval of the state mandatory standards of education at all levels of education
Order of the Minister of Education and Science of the Republic of Kazakhstan dated 17.06.2015 № 391	On approval of the qualification requirements for educational activities and the list of documents confirming compliance with them
Order of the Acting Minister for Investment and Development of the Republic of Kazakhstan dated November 14, 2018 № 791	On approval of the form of the act of implementation of the results of scientific research, scientific and technical works and (or) the results of scientific and (or) scientific and technical activities and the rules for its approval
Development program of NPJSC "Zhetysu University named after I. Zhansugurov" for 2021-2025	Development program
IRD-ZU-06-07	Regulations on the record keeping and archive management
IRD-ZU-09-06	Regulations on the Master's thesis/project
IRD-ZU-09-07	Regulations on the procedure for preparing a doctoral dissertation
IRD-ZU-12-02	Regulations on the competition of the Zhetysu University named after Ilyas Zhansugurov for grant financing of projects for commercialization of the results of scientific and scientific-technical activities of young scientists «Jas ǵalym»
IRD-ZU-36-02	Regulations on holding the competition of innovative ideas and projects «Jetisý-Startup» among beginning entrepreneurs and young innovators of Zhetysu University named after Ilyas Zhansugurov
IRD-ZU-12-04	Regulations on the Council of Young Scientists
IRD-ZU-15-02	Documented procedure. Management of documented information

## 3 TERMS AND DEFINITIONS

These Regulations apply the terms and definitions in accordance with the Law of the Republic of Kazakhstan «On Education», the Law of the Republic of Kazakhstan «On Science» and Law of the Republic of Kazakhstan «On commercialization of the results of scientific and technical activities». The following are the most commonly used terms and definitions in this document:

Science	The sphere of human activity, the function of which is the study of the laws of nature, society and thinking, the development and theoretical systematization of objective knowledge about reality for the rational use of natural resources and effective management of society
Research work activities	A type of activity related to the study of the surrounding reality in order to identify the features, patterns and laws inherent in the studied objects, phenomena (processes), and the use of the acquired knowledge in practice
Scientific and technical activities	Activities aimed at obtaining and applying new knowledge to solve technological, engineering, economic, social, humanitarian and other problems, ensuring the functioning of science, technology and production as a single system
Basic scientific research	Theoretical and experimental intellectual activity aimed at obtaining new knowledge about the basic laws of the development of nature, society, and man and their relationship
Applied scientific research	Activities aimed at obtaining and applying new knowledge to achieve practical goals and solve specific tasks
Experimental developments	They are based on knowledge acquired through scientific research or practical experience, and are aimed at preserving human life and health, creating new materials, products, processes, devices, services, systems or methods, and further improving them
The result of scientific and technical activities	The objectified result of scientific and scientific and technical activities, containing new knowledge or new solutions, recorded on any media and intended for use
Innovation activities	Activities aimed at introducing new ideas, scientific knowledge, technologies and products into various areas of production and management of the company, the results of which are used for economic growth and competitiveness;
Subjects of scientific and scientific-technical activity	Individuals and legal entities engaged in scientific and technical activities
Doctor of Science	Academic degree awarded by the state certification body of the Republic of Kazakhstan on the basis of the decision of the dissertation Council adopted after the public defense of the dissertation by the applicant who has the academic degree of Candidate of Sciences
Doctor of Philosophy (PhD)	An academic degree awarded by an authorized body on the basis of a public defense of a dissertation by an applicant who, as a rule, has an academic master's degree or a candidate's degree
Candidate of Sciences	Academic degree awarded by the dissertation council on the basis of a public defense of the dissertation by an applicant who has the qualification of a specialist with a higher special education or an academic master's degree, and approved by the state certification body of the Republic of Kazakhstan
Dissertation	Qualifying scientific work on a specific specialty of the relevant branch of science, prepared by the applicant independently or under scientific supervision
Proposal/Application	A duly executed proposal submitted by the applicant to the competition to receive grant funding
Grants	Money and other property transferred free of charge and irrevocably for conducting specific scientific research on the terms stipulated in the contract between the parties allocating and receiving the grant
Grant giver	<ul style="list-style-type: none"> <li>• subjects of scientific and (or) scientific and technical activity;</li> <li>• subjects of private entrepreneurship, as well as quasi-public sector;</li> <li>• foreign higher educational institutions and scientific organizations</li> </ul>

	accredited in the Republic of Kazakhstan in accordance with the legislation of the Republic of Kazakhstan; <ul style="list-style-type: none"> <li>• startup companies;</li> <li>• individuals or legal entities investing in the commercialization of the results of scientific and (or) scientific and technical activities.</li> </ul>
Grant recipient	The applicant who has successfully passed the competitive selection for grants and signed the Grant Agreement
Commercialization of the results of scientific and (or) scientific and technical activities	Activities related to the practical application of the results of scientific and (or) scientific and technical activities, including the results of intellectual activity, in order to bring to market or improved goods, processes and services aimed at generating income
Patent	The exclusive right to a product or process, which, as a rule, represents a new way of performing an action or offers a new technical solution to a particular task
State Scientific and technical expertise	System evaluation and findings, organized by the authorized state body for independent analytical evaluation of the examination object to determine the level of decision-making on important issues of scientific-technical progress

#### 4 SYMBOLS AND ABBREVIATIONS

The following designations and abbreviations are used in this provision:

University, ZU	NPJSC «Zhetysu University named after Ilyas Zhansugurov»
RW	Research work
RWMS	Research work of master's student
RWS	Research work of students
SSS	Student Scientific Society
TS	Teaching staff
SMSE	State mandatory standard of education
DSCSP	Department of Science and Commercialization of Scientific Projects
RSTA	The result of scientific and technical activities

#### 5 RESPONSIBILITY AND AUTHORITY

5.1 These Regulations are approved by the Chairman of the Board – Rector.

5.2 The Department of Science and Commercialization of Scientific Projects (DSCSP) is responsible for implementing the requirements of this provision.

#### 6 DESCRIPTION OF THE PROCESS

##### 6.1 General provisions

6.1.1 Main functions and tasks of the University in the field of research activities:

- conducting fundamental, applied, exploratory (initiative) research and development work, including in innovative areas;
- obtaining new knowledge through scientific research and creative activity of scientific and pedagogical workers and students;
- research and development of theoretical and methodological foundations for the development of higher education;
- development and implementation of innovative learning technologies in the educational process of the university;
- implementation of the results of scientific research in the educational process and production;

- formation and development of own scientific schools, active involvement of scientific and pedagogical workers and students in research work;
- expansion of the financial basis of research and development through the use of attracted funds and innovative activities;
- organization and management of research of students;
- "Packaging" of scientific development in the form of a promising innovative project for commercialization;
- Management of commercialization projects at the stage of technology introduction into production.

6.1.2 The scientific activity of the university is an indispensable part of the process of training specialists. The unity of the educational and scientific processes is ensured by:

- attracting students to participate in research and design work carried out at the expense of the republican budget of the Republic of Kazakhstan, other budgets and extra-budgetary sources of funding;
- conducting various forms of active academic work, diploma and course design, educational and industrial practice, targeted training of students and other forms of training of specialists on the basis of scientific and scientific production units;
- computerization of educational and scientific processes, formation of a unified information environment and mastering of modern methods and means of computer science by students.

6.1.3 The main scientific activity is carried out in higher schools, laboratories, centers, research units (laboratories, centers, research institutes) of the university. Coordination of research activities is carried out by DSCSP. On the basis of the EP plans the DSCSP develops plans, reporting forms, maintains a register of the university's RW, summarizes the results of research activities, summarizes them.

6.1.4 The Scientific Council annually reviews the results of the implementation of research plans in comparison with previous years and makes decisions on the development of the most relevant and promising areas of research work, as well as on the termination of scientific work that does not provide a real contribution to the acceleration of scientific and technological progress.

6.1.5 To popularize the results of research work and development of the university, the DSCSP organizes:

- work on participation in international, national, industry, scientific and technical, industrial, commercial and other conferences and exhibitions;
- issue and distribution of the scientific journal «Bulletin of ZU named after I. Zhansugurov», thematic collections, information leaflets, special advertising publications;
- conferences, seminars, symposiums, etc.;
- training seminars on scientific and technical activities and commercialization of the results of scientific developments.

## **6.2 Performers of research work**

6.2.1 Research work at the university is carried out:

- teaching staff and employees of scientific departments in accordance with individual plans during the main working hours. The teaching staff, researchers, managers and other employees of the university may be involved in the performance of contractual and budgetary research work on a part-time basis in their free time from their main work;
- students in the course of course, diploma projects (works), other educational and research works provided for by the curricula in student scientific circles, problem student bureaus, production teams and other organizations of student scientific creativity, as well as in higher schools, in research units of the university in their free time;
- doctoral students, master's students in accordance with their individual training plans, as well as in higher schools, in research departments of the university in their free time;
- The Council of Young Scientists, whose activities are aimed at supporting, supervising and promoting the development of scientific activity of young scientists through participation in organizing and conducting scientific events, accompanying various scientific and innovative competitions and projects (GNI-ZU-12-04).

6.2.2 Persons from among the teaching staff and other categories of employees of the university in case they fail to fulfill scheduled tasks for their main work on time, are not allowed to perform research work on a part-time basis.

6.2.3 Doctoral students and master's students are involved in research in their free time with the consent of their supervisors and subject to the successful implementation of an individual plan.

6.2.4 Students may be involved in research as technicians, laboratory assistants, workers in accordance with the qualification requirements, provided that the curriculum is successfully completed.

### **6.3 Research work of the teaching staff**

6.3.1 The main areas of scientific activity of the University teaching staff are:

- 1) conducting fundamental, applied, exploratory (initiative) research and development work, including in innovative areas;
- 2) implementation of scientific research by order, contract with third-party organizations;
- 3) organization of research work of students, master's students and doctoral students;
- 4) development and implementation of innovative teaching technologies and research results in the educational process and production;
- 5) formation of innovative infrastructure for research activities, creation and implementation of a mechanism for commercialization of scientific developments;
- 6) protection of intellectual property and copyrights of researchers and developers.

6.3.2 The implemented results of research work on the content can be:

- new theoretical conclusions, generalizations;
- new methods, research methods;
- the use of modern equipment, the latest devices;
- practical implementation of research work results (patents, implementation certificates, author's certificates, etc.) in certain areas of activity and other scientific achievements.

The main organizational units that ensure the implementation of research results are higher schools, research institutes, research centers, laboratories. Coordination and control of the implementation of research results in the educational process is carried out by the dean of the higher school. All full-time university teachers should participate in research.

### **6.4.6.4 Research work of doctoral students, master's students**

6.4.1 The scientific work of doctoral students, master's students is organized directly in higher schools and/or in scientific laboratories, centers, research institutes of the university. The management (consulting) of scientific research of doctoral students, master's students is carried out by teachers who comply with paragraphs 89, 116 of the Qualification requirements for educational activities and the list of documents confirming compliance with them.

6.4.2 Research work of doctoral students, master's students is carried out in accordance with individual plans

6.4.3 Doctoral students, master's students included in the number of performers of research work conducted by the EP and scientific departments of the university, make analytical reviews of the state of scientific problems, conduct scientific experiments, process the results obtained, design and manufacture experimental installations, as well as visual aids, technical and other training tools, participate in the development and debugging of PC programs, take part in the development of business games, in the modeling of practical situations and phenomena, participate in the preparation of research work reports.

6.4.4 At the Council of Higher Schools, reports on the implementation of individual work plans of doctoral students and master's students are heard at least once a year. Failure to perform the main part of the work provided for by individual plans is the basis for the expulsion of doctoral students, master's students by the decision of the Higher School Council.

6.4.5 The result of the research work of doctoral students, master's students and the criterion of the quality of their scientific training are dissertations.

The requirements for the content and design of dissertations are set out in IRD-ZU-09-06, IRD-ZU-09-07.

6.4.6 Scientific supervisors (consultants) of master's students and doctoral students who systematically do not fulfill individual plans, including those who do not submit dissertations for defense

on time, are deprived of the right to guidance (consulting) by the decision of the Scientific Council of the University on the recommendation of the Council of Higher Education.

## **6.5 Research work of students**

6.5.1 Research work of students is a mandatory, integral part of the training of qualified specialists at the university as an inseparable component of a single process: educational, scientific and innovative.

6.5.2 The main objectives of the research work of students system at the university are:

- creation and development of conditions (legal, economic, organizational, resource, etc.), providing an opportunity for each student to realize his right to creative personal development, participation in scientific research and scientific and technical creativity - full, equal and accessible to everyone in accordance with his abilities and needs;

- ensuring the unity of educational, scientific and innovative processes with the formation and development of creative abilities, improving the professional and creative training of students, improving the forms of attracting young people to scientific research, scientific, technical and inventive activities.

6.5.3 The main tasks of the functioning of the research work of students system are:

- involvement of students in innovation work, inventive creativity, entrepreneurship;
- creation of favorable conditions for the development and functioning of various forms of scientific creativity of young people based on domestic and foreign experience, the results of scientific and scientific-technical developments;

- assistance to the comprehensive development of the student's personality, the formation of his objective self-esteem, the acquisition of skills in creative teams, involvement in organizational and innovative activities;

- development of the ability to use scientific knowledge and adapt quickly to changing situations, readiness for advanced training and retraining;

- providing students with the opportunity to try their hand at solving urgent problems in various areas of science and technology, publish significant research results;

- ensuring the effective selection of capable, gifted and talented young people to replenish the pedagogical and scientific staff of the university.

6.5.4 The forms of research work of students are:

- participation in the implementation of research work projects;
- work in Student Scientific Society, scientific circles, problem groups;
- participation in conferences, seminars and round tables;
- preparation of publications in scientific journals and collections of reports, materials and conference abstracts;

- participation in competitions (university, regional, international);

- research internships.

6.5.5 The scientific work of students is a continuation and deepening of the educational process and is organized directly in higher schools, laboratories, scientific departments of the university, in student scientific and technical associations (centers, research institutes, start-up academies, etc.).

The management of scientific research of students is carried out by professors, associate professors, university lecturers.

6.5.6 In order to promote the realization of the creative and scientific potential of young people, a Student Scientific Society operates at the university. The SSS of the university includes representatives of all 6 higher schools of the university. In turn, in each higher school there are SSS, whose members are engaged in research and creative activities as part of student scientific circles and problem groups.

6.5.7 Direct participation of students in research, scientific and technical, design and other works carried out by the university is provided through organizational forms and activities of the RWS system, which are divided into:

- research work included in the educational process;

- research work performed during extracurricular time (over or outside the curriculum);

- scientific, scientific and technical organizational and mass events, including those of a competitive nature, stimulating the development of the RWS system and introducing students to creativity (student scientific conferences, seminars, student Olympiads, competitions, etc.), simultaneously determining the effectiveness and efficiency of the actual scientific work of students (publications, authorship in scientific



reports, author's certificates patents, developments implemented in practice, awards at competitive events, etc.).

6.5.8 Research work included in the educational process involves the performance of educational tasks, including during the period of industrial and educational practice, laboratory work, term papers and theses / projects containing elements of scientific research or having a real research nature.

6.5.9 Research work performed by students during extracurricular time (over or outside the curricula), organized in the forms:

- work in student scientific seminars;
- participation of students in groups or individually in the implementation of state budget or contractual topics, in works on creative cooperation, within the framework of state, interuniversity or intrauniversity grants;
- work in student scientific and scientific-technical associations (student scientific societies, creative workshops and studios, research institutes, etc.).

6.5.10 Students included in the number of performers of research works carried out by higher schools and scientific departments of the university, make abstracts on special literature, master the skills of conducting an experiment and processing the results obtained, design and manufacture visual aids, laboratory installations and technical training tools, participate in the development and debugging of PC programs, take part in development of business games on simulation modeling of practical situations and phenomena. Assignments for students involved in the performance of these works should include research, creative elements.

6.5.11 The general management and responsibility for setting up and organizing the RWS system at the university is assigned to the Chairman of the Management Board - the Rector of the University and a member of the Management Board - the Vice-Rector for Scientific Work.

The functioning of the RWS system at the university is also provided by the Scientific Council, the Councils of Higher Schools, DSCSP.

6.5.12 The necessary material costs (for equipment, energy, materials, etc.) related to the conduct of research and design work performed by students in higher schools and in scientific laboratories are carried out in accordance with the established procedure at the expense of funds received by the university from the budgets for educational activities and research work, from orders for contractual works and services, and other off-budget sources.

The allocation of funds for the scientific work of students and control over their spending at all higher schools and in all other departments of the university is carried out by the Board.

Planning and holding of organizational and mass events of the RWS system is carried out at the expense of the university, as well as additional resources attracted for this purpose from sources provided for by the current legislation of the Republic of Kazakhstan.

## **6.6 Planning and reporting of research work**

6.6.1 Open research works carried out at the university are subject to state registration in accordance with the requirements of the current regulatory and technical documentation. Works related to the maintenance of scientific research and the presentation of scientific and production services are not subject to state registration.

6.6.2 State registration and accounting of completed and completed open (unclassified) Research work is carried out by «NCSTE».

6.6.3 The basis for planning research work at the university is the RW plan, which is drawn up for a calendar year on the basis of individual plans of teachers, research plans of higher school, scientific departments in the prescribed form in accordance with the University Development Program, with national and departmental standards.

6.6.4 According to the results of the research, reports are compiled for the calendar year on the basis of individual plans of teachers, including lists of scientific publications of teachers, research work plans of Higher schools, scientific units in the prescribed form.

6.6.5 The executors are responsible for the accuracy of the data contained in the plans and reports. Plans and reports on RW, RWS are subject to mandatory regulatory control at the university. Plans and reports on RW, RWS of Higher schools and scientific departments are approved by a member of the Board – the Vice-rector for Scientific work, plans and reports of RW, RWS of the University are

approved by the Chairman of the Board – the Rector. All types of research plans and reports are discussed and approved at meetings of the Councils of Higher schools.

The results of the research activities of the university are subject to annual discussion at the end of the calendar year, the results of the research work of students at the end of the academic year at the Scientific Council of the University. The University submits research reports within the time limits set by the customer for conducting research work.

6.6.6 The evaluation of the effectiveness of research work is carried out according to:

- citation of scientific articles and monographs of teachers;
- the volume of funded research projects;
- the volume of research grants;
- the number of doctoral students, master's student who defended their dissertations within the time limit set by individual plans;
- Research work reports;
- the number of published scientific articles;
- the number of students involved in research work and the effectiveness of research work of students;
- the number of acts of implementation of research results;
- the number of acts of implementation of the results of research, scientific and technical works, (or) the results of scientific and (or) scientific and technical activities (Annex 1 of the Order of the Acting Minister for Investment and Development of the Republic of Kazakhstan dated November 14, 2018 No. 791);
- the number of patents and copyright certificates obtained.

## **6.7 Creation and implementation of a mechanism for commercialization of scientific developments**

6.7.1 Participants in the commercialization of the results of scientific and (or) scientific and technical activities are teaching staff, students (students, master's student and doctoral students), employees of scientific departments, DSCSP and Startup Academy.

6.7.2 Competitions are held annually at the University to create and implement the RSTA mechanism:

- competition for grant financing of projects for commercialization of the results of scientific and scientific-technical activities of young scientists «Jas galym»;
- competition of innovative ideas and projects «Jetisý-Startup» among aspiring entrepreneurs and young innovators.

Responsibility for the organization and holding of the contest «Jas galym» and «Jetisý-Startup» is assigned to the DSCSP and the Startup Academy, respectively.

6.7.3 The mechanisms of commercialization of the results of scientific and(or) scientific and technical activities are set out in the regulations on the holding of competitions IRD-ZU-12-02, IRD-ZU-36-02.