



**SHAKARIM STATE UNIVERSITY OF SEMEY**

**Establishment of Centers  
for Competence and Employability  
Development**

**UNIVERSITY REPORT**

**Kazakhstan  
2016**



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## 1. General information about Shakarim State University of Semey

Shakarim State University of Semey is one of the largest multidisciplinary universities in the East Kazakhstan region.

It provides training of specialists for a wide range of in-demand occupations in the fields of natural, social and humanitarian, technical, agricultural science, veterinary medicine, business, and law sciences.

Organizational structure of Shakarim State University of Semey includes 7 faculties (Agrarian Faculty, Faculty of Economics, Law and Human Sciences, Engineering - Technology Faculty, Faculty of ICTs, Faculty of Education, Science and Mathematics Faculty, Faculty of Philology), 9 research institutes and research centers, 37 departments. Departments of the University are presented in Annex 1.

Confirming its commitment to the Bologna process, the university has entered into signatories of Magna Charta Universitatum, and has joined the Eurasian Association of Universities.

The University has proved its high quality training by passing the state certification, national and international accreditation of its programs.

Shakarim State University of Semey keeps high positions in the general ranking of multidisciplinary universities of Kazakhstan due to effective integration of traditional and innovative forms of training.

According to the results of its activities, the university is noted by the diploma for a contribution to quality development of educational programs at the VI Kazakhstani international exhibition "Science and Education of 21st Century" (Astana, 2012), letter of gratitude for the active participation in competition for an award of the President of Kazakhstan "Altyn Sapa" (2013).

Satisfaction of modern society's needs for qualified specialists is one of the main objectives of Shakarim State University of Semey.

Developing traditions of HEIs in the field of professional education, with the focus on sustainable improvement of all key processes, on quality development of training of specialists, and being guided by satisfaction of the changing requirements of the labor market, the university has determined its Mission:

Implementation of educational, scientific and social-cultural activities on the basis of provision of modern knowledge and transfer of technologies, integration of research potentials with innovative activities of the Market in East Kazakhstan region.



Vision. By 2022, Shakarim State University of Semey will become a unique multidisciplinary HEI with the recognized brand, applying the latest technologies in science and education, known in the region as the center of scientific-applied ideas and inventions for Kazakhstan business.

Strategic values:

- Involvement into Strategy;
- Entrepreneurial University;
- Professionalism;
- Openness to partners;
- High standards of education quality;
- Achievements in science and its commercialization.

Licensing of educational programmes. The University provides training of specialists on 64 undergraduate programs, 2 programs of higher professional education, 38 Master degree programs and 6 Doctoral degree programs within the the General License (No. 13013970 of 28 August 2013) given for educational activities, and Annexes to the License, issued by the Committee for control in Education and Science of the Ministry of Education and Science of the Republic of Kazakhstan.

Accreditation. Shakarim State University of Semey during 2013 – 2015 years, within the contracts signed with the Independent Agency for Accreditation and Rating (IAAR, kz abbr. NAAR) and the Institute for accreditation, certification and quality assurance (ACQUIN) has successfully passed the stages of institutional and specialized accreditation.

In 2013, the University passed institutional accreditation at NAAR.

Data on specialized accreditation of educational programs for the training levels of 2014-2015 period (table 1.1).

**Table 1.1**

Levels of Training Programs	National Specialized Accreditation (NAAR, Kazakhstan)	International Specialized Accreditation (ACQUIN, Germany)	Total
Baccalaureate	57	4	61
Master's	32	4	36
Doctorate	1	2	3
<b>Total:</b>	<b>90</b>	<b>10</b>	<b>100</b>



Certification of the Quality Management System. In 2005, Shakarim State University of Semey has implemented and certified the Quality Management System. Currently, the University cooperates with the international certification body TÜVSÜD Management Service GmbH (certificate No. 12 100 49381 TMSISO 9001-2008).

**Participation in Rankings.**

According to the results of General ranking of HEIs of the Republic of Kazakhstan of 2015, and according to the Independent Kazakhstan Agency for quality assurance in education (IQAA), Shakarim State University of Semey is on 12th position.

The University annually participates in the ranking of educational programs, conducted by the Independent Kazakhstani Agency for Quality Assurance in Education (IQAA, kz abbreviation - NKAOKO), and by the Independent Agency for Accreditation and Rating (IAAR, kz abbr.NAAR).

In 2015, Shakarim State University of Semey participated in the world ranking of universities - Webometrics Ranking of World Universities - and was ranked 5573rd place.

According to ranking of distance learning system's availability, and the level of elaboration of technologies of 2015, the University took the 1st place among the best multidisciplinary universities of Kazakhstan.

According to Ranking by Independent Agency for Accreditation and Rating (IAAR, kz NAAR) of 2016, the following educational programs took prizes (table 1.2):

**Table 1.2**

<b>№</b>	<b>Code</b>	<b>Names of Programs/Courses</b>	<b>Place in Ranking</b>
<b>Baccalaureate</b>			
<b>1</b>	5B072700	Technology of food products	<b>2</b>
<b>2</b>	5B010300	Pedagogy and Psychology	<b>2</b>
<b>3</b>	5B072000	Chemical technology of inorganic substances	<b>2</b>
<b>Master's</b>			
<b>4</b>	6M072400	Technological machines and equipment (by branches)	<b>1</b>
<b>5</b>	6M010900	Mathematics	<b>2</b>



6	6M072700	Technology of food products	<b>2</b>
7	6M072800	Technology of processing manufactures (by branches)	<b>3</b>
8	6M120200	Veterinary sanitation	<b>3</b>
<b>Doctorate</b>			
9	6D072700	Technology of food products	<b>2</b>
10.	6D072300	Technical Physics	<b>3</b>

#### Educational activities of the University

The total number of SSUS students is 4297 for the 1st June 2016, from them:

- on full-time form - 3568 students, including on the basis of the state educational grant-1932, on a contractual basis with a full recovery of costs –1636;
- on extramural (distance-learning) studies –729 students, including on the basis of the state educational grant-21, on a contractual basis with a full recovery of costs –708.

One of the most important indicators of quality and efficiency of educational activities of the university, recognition of its prestige at national and international levels is availability of foreign students.

In Shakarim State University of Semey 92 foreign students are being trained (table 1.3).

Information about foreign students being taught at Shakarim State University of Semey

**Table 1.3**

№	Countries	Shakarim State University of Semey
1	Mongolia	67
2	China	17
3	South Korea	5
4	Russian Federation	2
5	Azerbaijan	1
	<b>Total:</b>	<b>92</b>

In 2015 reception of 103 people on 34 specialties of a profile and scientific-pedagogical magistracy and 2 people on 2 specialties of doctoral studies of PhD has been carried out.



For September 1, 2015 the contingent of undergraduates of 1 and 2 years of training has made 217 people, the contingent of doctoral candidates of 1,2,3 years of training - 8 people (table 1.4).

**Table 1.4 Number of Master and Doctoral (PhD) students on 1st of September 2015**

<b>Master's</b>	1 <sup>st</sup> year	Grant	79
		Self-financing	24
	2 <sup>nd</sup> year	Grant	103
		Self-financing	11
<b>Total</b>			<b>217</b>
<b>Doctoral programs</b>	1 year	Grant	2
	2 year	Grant	2
	3 year	Grant	4
	<b>Total</b>		

The university develops and improves its technologies of training, introduces modern distance learning technologies for 55 specialties, a thesaurus method and the automated information Platonus system.

For high-quality control of educational process, the University uses an information system "Electronic University" which contains the database of students, data on their current progress, personal identification of each undergraduate and graduate student.

The most important direction of educational activity of the university is development of polylingual education.

Since 2012 the University has been expanding the scope of subjects taught in English. The University introduced its "Program of developing the polylingual education till 2020" which focuses on training its pedagogical staff for teaching disciplines in English, strengthening of educational and methodical base for multilingualism, stage-by-stage increase of the number subjects taught in English.

The database of disciplines and teachers for polylingual education has been created.

Polylingual training is conducted in the directions of training bachelors (economic, engineering, natural-science and pedagogical).

In 2016 the University has created a number of modular educational programs (MEP) with the corresponding professionally-oriented educational trajectories. Employers, heads of the entities, leading experts of various organizations have taken part in the creation of MEP.





One of effective tools for credit technology of training is the use of distance-learning educational technologies (DET, Kz abbr.: DOT). Learning and teaching process with DET is performed via an electronic educational platform "Moodle 3.0".

The center of professional development and career coordinates activities of university departments involved in organization and carrying out of professional practice. Large enterprises of the region give help to the university in organization and carrying out different types of practice.

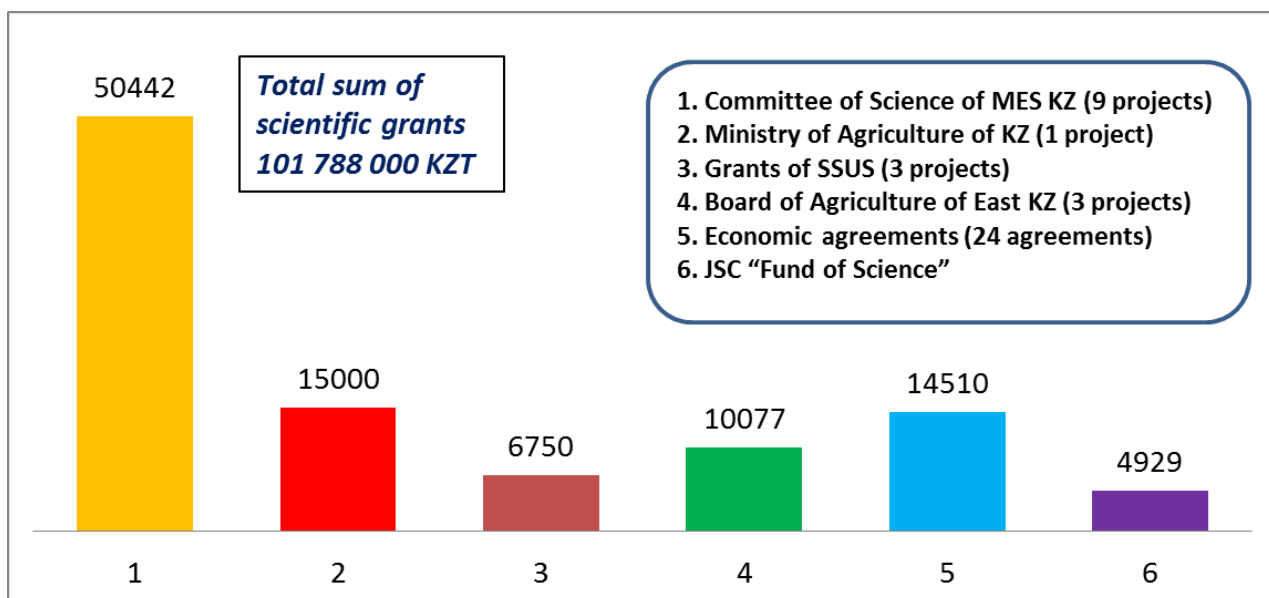
### **SCIENTIFIC AND INNOVATIVE ACTIVITIES OF UNIVERSITY**

The University carries out research works on 9 priority directions of science of the Republic of Kazakhstan:

- Shakarim's heritage and value-semantic orientations, ways of successful socialization of a person in poly-cultural space of the Republic of Kazakhstan;
- Development of techniques and technologies of food production for mass and functional feeding;
- Ways of implementation of the Program for industrial-innovative development of the East Kazakhstan region;
- Innovative technologies for sustainable development of Agricultural Production Complex (APC) of the North-East Kazakhstan;
- Raising the quality of research work and introduction of its results into the educational process;
- Psycho-pedagogical bases of learners' self-realization in the context of continuous and life-long education;
- Staffing and scientific and innovative support in area of rational environmental management and biological systems;
- Problems of innovations of fundamental and applied research of Kazakh language, Russian language and literature;
- Enhancement of Methodology of teaching disciplines of a physical and mathematical cycle in higher education institution and in school.

Annually, the Ministry of Education & Science of the Republic of Kazakhstan holds competitions:

- "The best teacher of higher education institution" (in 2015, 4 teachers of the university became owners of the award);
- "The state scientific grant for scientists who have made an outstanding contribution to the development of science and technology" (in 2015 - one owner of a grant);
- "State scientific grants for talented young scientists" (in 2015, 3 teachers of the university became owners of a grant);



**Figure 1.1 – Implementation of scientific projects**

Patent activity of the university scientists (important security documents):

- 13 innovative patents for inventions of RK;
- 5 provisional patents on inventions, RK;
- 1 patent for the useful model, RF;
- 11 certificates of state registration of rights for the object of author's right, RK.

In 2015 faculty members of the university wrote and published: 44 monographs, 6 textbooks, 91 education guidances, 47 educational and methodical benefits, 1199 scientific articles and theses of reports.

From 787 published articles:

247(31%) are published outside Kazakhstan – in Africa, the USA, Bulgaria, Germany, Poland, Russia, etc.;

46 articles (13,86 printed pages – 6%) are published in English;

154 articles (92,24 pr.pages – 20%) in the editions included in the list of Committee for Control of Education and Science.

In 2015 academic year, 23 articles are published in the leading foreign quoted editions with non-zero impact-factor:

There are 12 scientific-research institutes and scientific centers at Shakarim State University of Semey:

- Testing regional laboratory of engineering profile "Scientific Center of Radio Ecological Research"



- Scientific Center “AgroTekhnoPark”
- Research Institute of chemical- ecological problems
- Scientific-Research Institute of Meat and Dairy Industry
- Scientific-Research Institute of Veterinary and Livestock
- Scientific Center “Shakarimtanu (Shakarim studies)”
- Scientific Center for Sustainable Development
- The Center for Innovative Educational Technologies
- M.Kozybaev Scientific Center for Historical investigations
- Psycholinguistic Center
- The Center of Pedagogical Research
- Scientific Center of Food Biotechnology

In 2015 the University signed 24 acts of bringing the results of scientific-research work into production, 125 acts of bringing results of scientific-research work into educational process.

### **INTERNATIONAL COOPERATION**

International Cooperation of the University is directed at integration into the world educational space and mobility of staff and learners. The University works in partnership with highly ranked universities of the USA, Europe and Asia, where its students study on dual degree programs, on students exchange programs, and staff members are trained on internship programs.

The Department of International Cooperation of the University designs and implements innovative educational projects:

1) dual degree programs, based on Integrated study plans, with:

- Gyeongsang National University (Republic of Korea), Baccalaureate 2+2 on English Language & Literature, Informatics;
- Pittsburg State University (USA) Baccalaureate 2+2 on Teaching English;
- University of Chemical Technologies and Metallurgy, dual Master program 1+1 on Biotechnology;

In the process of signing and launching

With the University of Coventry (UK) dual degree Baccalaureate 3+1 on Psychology and English;

With the Jan Amos Komensky University of Applied Sciences (Leshno, Poland) dual degree 1+2+1 on Agriculture/Agronomy, Machine Building/Diagnostics and Exploitation of Machines, Economics/Communications in Business, Philologist in Business/English language

Kyungdong University, South Korea, dual degree Baccalaureate 2+2 on BBA and BHM, internship programs for staff members, students exchange, Korean language & culture study program



Academic mobility and students exchange programs with universities of South Korea, USA, Turkey, Hungary, Russia, Poland and others. In 2015-2016, 32 students studied abroad on academic mobility and Erasmus+ KA1 programs.

Ten professors from foreign universities were invited to read lectures to undergraduates and graduate students, to hold master classes and seminars for staff members, to develop perspective scientific projects for joint activities in 2015-2016 academic year.

2) Shakarim State University of Semey has signed Erasmus+ KA1 Agreements with several foreign universities

Warsaw University of Ecology and Management, Poland

- 2 staff members, 1 administrative member in 2015-2016
- 2 undergraduate students, 2 staff members (1 lecturer, 1 administrative person) in 2016-2017
- Visiting staff member from WUEM of Poland came to Shakarim State University of Semey via Erasmus+ KA1 in May 2016

Janos Kodolani University of Applied Sciences, Budapest, Hungary

- 2 administrative staff members and 1 lecturer visited JKU in April 2016
- 2 undergraduate students studied at JKU during the whole Spring semester 2015-2016

University of Pamukkale, Turkey

- applications of 27 undergraduate and graduate students, 9 staff members have been sent to PAU for 2016-2017
- NB: 1 undergraduate student and 1 professor of SSUS have been awarded Mevlana governmental scholarship of Turkey for 2016-2017

3) SSUS is involved into 2 Erasmus+ KA2 projects:

- Project # 561603-EPP-1-2015-1-DE-EPPKA2-CBHE-JP, COMPLETE “Establishment of Centers for Competence and Employability development“.

European coordinator: The University of Applied Sciences of Biellefeld, Germany/ duration: 3 years. Partner-countries of Germany for the project: Russia, Kazakhstan, Slovenia, Greece. Objectives of the project: providing help to university graduates for life-long learning and developing the necessary competences according to requirements of the Labor Market.

- Project # 561627-EPP-1-2015-1-PL-EPPKA2-CBHE-JP “Development of 2-cycle innovative program on Microelectronic Engineering”.

European coordinator of the project: Krakow Technical University, Poland. Partner-countries of Germany for the project: Kazakhstan, Armenia, Izrael, Italy

Objectives of the project: modernization of programs in the field of microelectronic engineering for perspective branches of European industry.

Target groups of the Project: faculty and staff members, undergraduate and graduate students, technical personnel



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The University has wee-developed cooperation with International Funds and Organizations:

- SES of Germany: provides trainers for all subject areas of the University, e.g. in 2015-2016 there were trainings on Methodology of teaching foreign languages ( trainer Mr.Leo Hoffman), 2 seminars on using e-platform MOODLE-3 for learning and teaching (trainers: Mr. Gerd Homberg, Mr. Horst Langer);
- RELO of the US Embassy in Kazakhstan: annually provided seminars for teachers of English and teachers of subjects taught in English (STEM).

## 2. Employability at Shakarim State University of Semey

To examine the issues concerning understanding of “employability”, which is defined in the framework of the project as a competitive quality of a person (graduate) whose competences allow him/her to work efficiently for the company/organization, the online survey of the three target groups (students, graduates and employers) was conducted. The objectives of the survey were to identify the opportunities and existing conditions to get a job and build a successful career, determine what expectations employers hold for graduates and specify how hiring process is understood by students and graduates in the Semey region.

The competence-based approach, which is considered to be the most reliable way to determine the level of employability, was used and there was designed the questionnaire aiming to assess relevance of the competences that have most influence on the graduate employability.

The assessment was carried out by means of ordinal scale which allows to define relative differences between the measured features and arrange the answers hierarchically. Taking into consideration existing approaches to the typology of key competences, the following groups, each of which included the set of certain competences, were singled out:

- **General professional competences** (skills for seeking and processing the information; computer and Internet literacy; ability to carry out business correspondence, prepare reports and other documents; understanding of business processes at the company and their interrelation; being literate in the Russian language; knowledge of foreign languages);
- **Communicative competences** (negotiating skills, ability to present the product or service, express one's ideas clearly, establish contacts at work and with representatives from other companies, for example clients, suppliers);
- **Behavioural traits** (being responsible, self- disciplined, goal oriented, compliant with the corporate rules, loyal to the company, able to use working time efficiently, work under pressure, develop one's business process in the organization);
- **Teamwork skills** (ability to encourage other people to work; ability to take the responsibility, work in a team to achieve common goals; question existing ideas and opinions; defend your opinion; positive thinking);
- **Analytical competences, ability to learn during the lifetime and grow professionally** (ability to understand new concepts quickly, being career

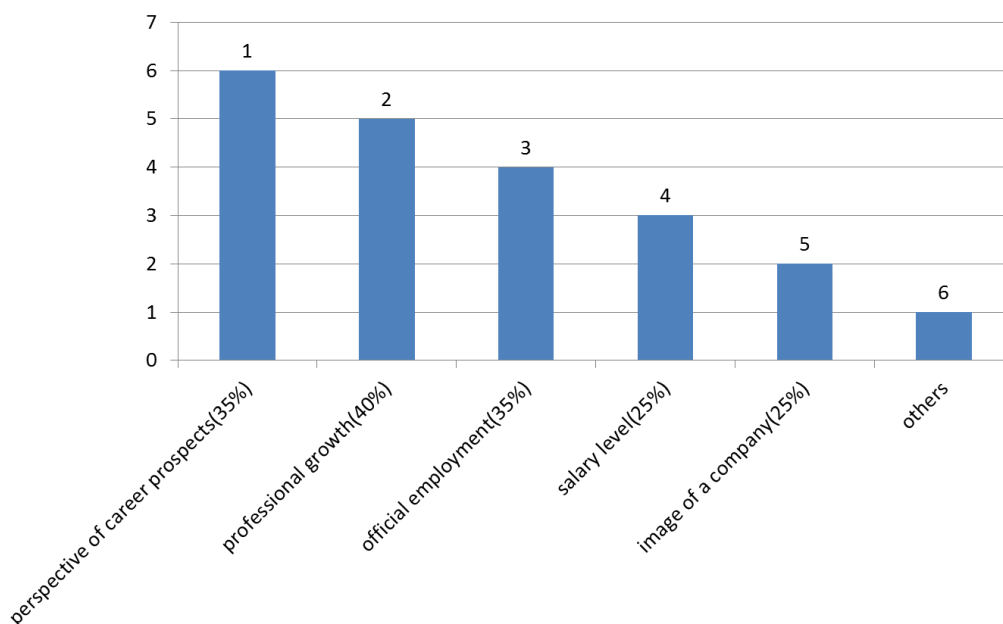


oriented and strive for professional growth, analytical and systems thinking; ability to envisage the effect the decisions will have);

- **Innovative competences** (ability to forecast opportunities, generate ideas; disengage oneself from smb/somth; being initiative, independent; not to be constrained by the situation).

The questionnaire had been done for categories of various respondents (students, graduates, employers) and it showed ranging of main criteria and competences (results indicated in the analysis are taken on basis of IBM SPSS Statistics 20). In total, 87 respondents were questioned.

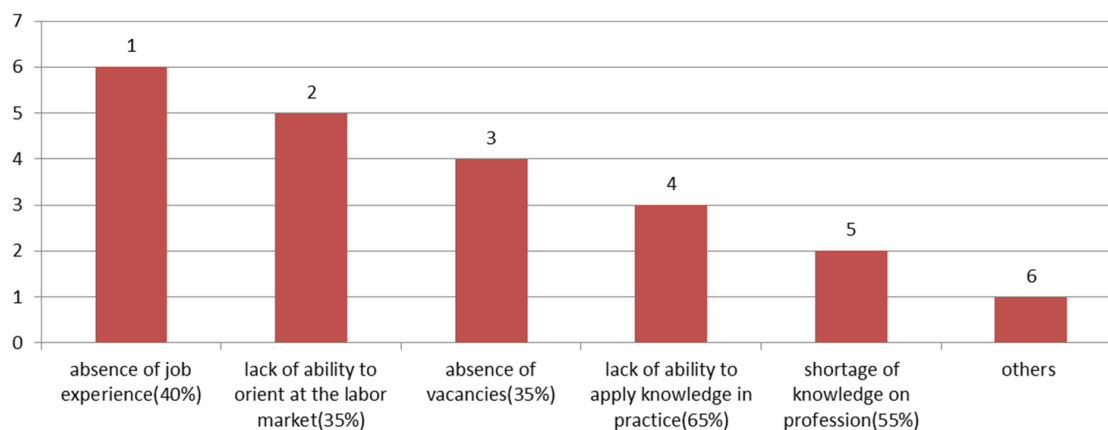
**Students.** The students answered that their job search will focus primarily on the perspective of career prospects(35%) and professional growth(40%), further on the official employment(35%), salary level(25%), on the image of a company(25%) and others (location etc.)



**Figure 2.1 – Job searching points**

After graduation, all students are focused on the job search, some looking for a job in the study process. The primary means of students' job search is sending CV to recruiting agencies and specialized websites, some of them count on the help of relatives and acquaintances, and assistance from the Department.

According to students' answers, they do not get adequate competences from HEI in business correspondence, report writing, presentation skills, documents provision, negotiating skills, have poor understanding of the business processes of the enterprise and their relationships, computer skills and the Internet, etc.



**Figure 2.2 – Basic difficulties in the process of employment**

Firstly, students consider that absence of job experience(40%) and lack of ability to orient at the labor market(35%) are basic difficulties in the process of employment. Following are absence of vacancies(35%), lack of ability to apply knowledge in practice(65%), shortage of knowledge on profession(55%), and others (psychological unavailability).

Students consider as the most important competences for future employment: effective use of ICTs and the Internet, conducting business correspondence and negotiations, competence to analyze and constitute reports. Students note the need of high-quality theoretical preparation and skills to apply the gained knowledge in practice. Besides, students consider as very important communication skills for a team work.

According to the survey, the main advantages for getting a job are a high-quality academic training and the readiness for further training.

The main drawbacks of graduates in the employment process are high expectations of wages, a reluctance to start a career with lower levels, overestimation of personal professional potential.

**Graduates.** When looking for a job, graduates place the salary level on the first place (56,5%), among others: prospects for career development (32,6%), professional growth (37,0%) and the official employment (26,1%). Less important factors or them are: working hours (8-hour working day) – 39,1%, the company's image-26,1% , and other factors (mainly relations in the team and the social package).

Generally, graduates look for a job through portals of recruiting agencies, and also through different announcements; the help of relatives is an additional job search method.

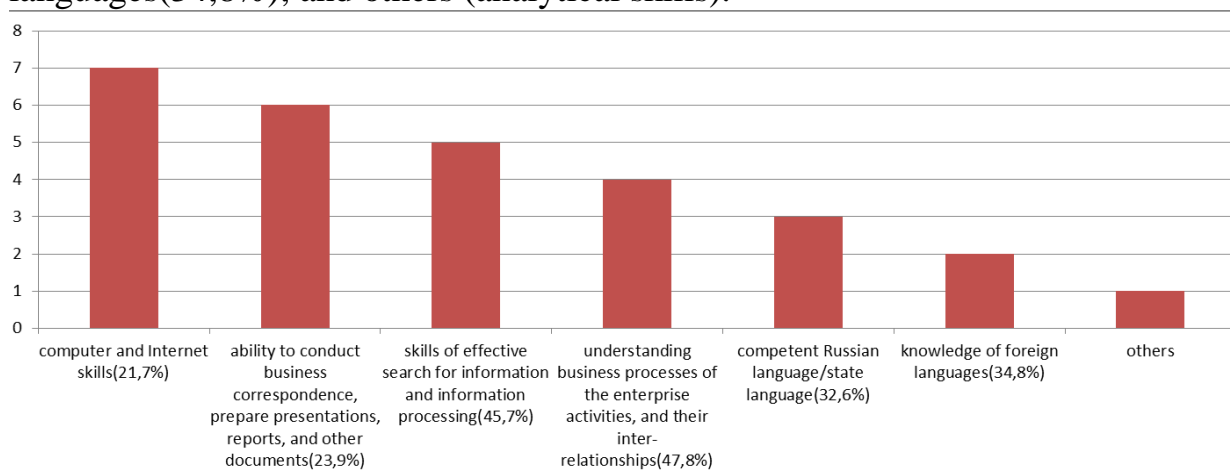
Competencies required at work and which were not sufficiently formed while studying in HEI: understanding of business processes of the enterprise and their



interrelationships, the ability to competently conduct business correspondence, report, presentations and other documents, the ability to establish contacts with staff members at work, computer skills and Internet skills, practical skills in their professional area.

While searching for a job, graduates faced the following problems: lack of vacancies(47,8%), lack of job experience(43,5%), inability to maneuver on the labor market(30,4%), inability to apply knowledge in practice(41,3%), lack of professional knowledge(52,2%), and others (inability of self-presentation, lack of personal ties for job search, over- expectations for salary, etc.).

General professional competencies, necessary for a graduate (fig. 2.3), are: computer and Internet skills(21,7%); ability to conduct business correspondence, prepare presentations, reports, and other documents(23,9%); skills of effective search for information and information processing(45,7%); understanding business processes of the enterprise activities, and their inter-relationships(47,8%); competent Russian language/state language(32,6%); knowledge of foreign languages(34,8%); and others (analytical skills).



**Figure 2.3 – General professional competencies, necessary for a graduate**

According to graduates, the communication competences which are necessary for professional activities, look as following: firstly, it is the ability to clearly express thoughts and ideas; then, the ability to communicate in a team; ability to present a product and service; ability to negotiate; ability to build contacts with company's partners (customers, suppliers, etc.); others (the ability to conduct correspondence in Kazakh, Russian and foreign languages).

Behavioural characteristics required to graduates are: responsibility, discipline; commitment to results; effective use of time; ability to comply with the



corporate rules to retain the loyalty of company; the ability to work in any environment, under pressure, in stressful situations; ability to organize effective work process in the organization; others (leadership, ability to work in team, etc.)

Skills, related to teamwork, which are necessary for a graduate, are as follows: ability to take responsibility; ability to work in a team and achieve collective goals; motivation, ability to challenge existing ideas and opinions; ability to motivate others to work; the ability to gracefully defend your position; a positive attitude to the surrounding reality; others (the ability to organize the process, leadership)

The main analytical competences which according to graduates are necessary for professional activities, are the following: aiming at career development; a capability to quickly master new knowledge; analytical thinking; readiness for fixed professional growth; systematic thinking, a capability to count consequences of the decisions made; others (strategic thinking, creative thinking, logical thinking).

Innovative competencies required from the graduates, are as follow: initiative, independence, self-reliance; vision of new opportunities; the ability to abstract and go beyond the situation; others (non-standard thinking, strategic vision, etc.)

The most important competencies necessary for the graduate are considered to be: professional knowledge, communication skills, performance and workability, etc.

The main advantages of graduates at employment: high-quality academic preparation, readiness for further training, freedom from stereotypes, etc.

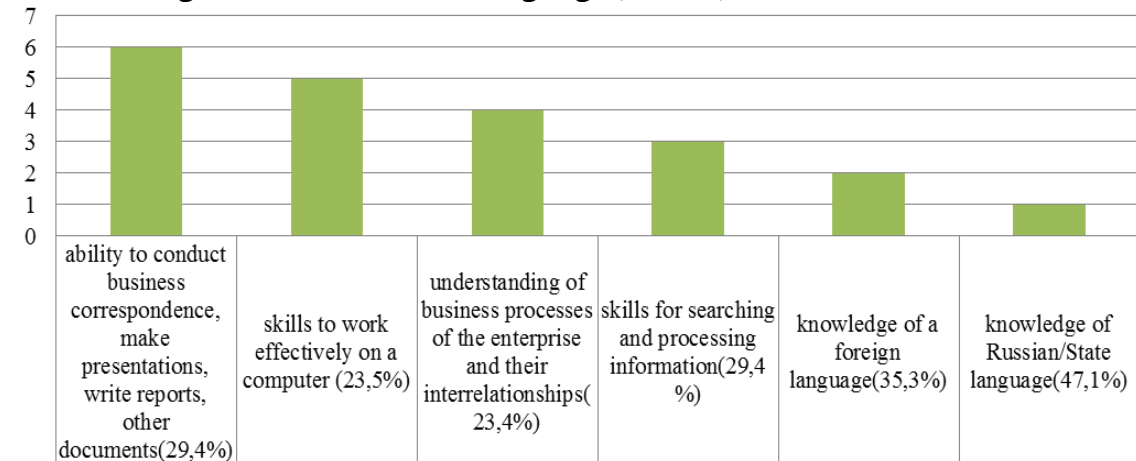
The main drawbacks of graduates in employment process: a lack of practical preparation, overestimation of personal professional capacity, the reluctance to start a career with the grass-roots levels, high expectations about the level of wages.

17 % of alumni who graduated 1 or 2 years ago, are still looking for a job, and 6% work in other professional fields, not according to their professional degrees.

**Employers.** Employers believe that graduates must have the following professional competencies(fig. 2.4):

- ability to conduct business correspondence, make presentations, write reports, other documents(29,4%);
- skills to work effectively on a computer (23,5%);
- understanding of business processes of the enterprise and their interrelationships(23,4%);
- skills for searching and processing information(29,4%);

- knowledge of a foreign language(35,3%);
- knowledge of Russian/State language(47,1%).



**Figure 2.4 – General professional competencies, necessary for a graduate**

According to employers, the graduate should have excellent communication skills such as: ability to clearly Express ideas(41,2%); the ability to communicate in a team(41,2%); ability to present product, service(35,3%); ability to build contacts with company's partners (customers, suppliers, etc.) (23,5%); ability to negotiate(52,9%).

Employers consider the following as the main behavioral characteristics: responsibility(52,9%), discipline; focus on results(29,4%); the ability to use working time efficiently(29,4%); the ability to operate in all conditions, under pressure and under stress among them(35,3%); ability to comply with corporate standards, to maintain the loyalty of the company(29,4%); ability to establish a working process in the organization(52,9%); and others (creativity, self-improvement, ability to master their skills and so forth.)

Graduates should have the skills associated with working in a team:

- The ability to take responsibility(35,3%)
- Ability to work in a team and to achieve collective goals(35,3%)
- The ability to challenge existing ideas and opinions(52,9%)
- The ability to motivate others to work(35,3%)
- The ability to properly defend its position(52,9%)
- Positive attitude to reality(58,8%)

Employers especially appreciate applicants' analytical competencies like the following ones: analytical thinking; the ability to quickly learn new skills; committed to continuous professional growth; focus on career development;



systemic thinking, the ability to calculate and predict the consequences of decisions; and others (the ability to plan, make decisions quickly)

And also the innovative competences necessary for graduates:

- Initiative, independence
- A capability to generate new ideas
- Vision of new opportunities
- Ability to abstract, go beyond a situation
- others (strategic thinking, critical thinking)

Motives of employers at selection of graduates for work: high-quality theoretical training and readiness for further training.

The main reasons for the refusal of employers to employ graduates, are: a lack of practical training, over-expectations about the level of wages, lack of professional experience.

The most attractive forms of cooperation between the University and organizations are the following: targeted training of students by the request of an organization; development of joint educational programs on the profile of an organization; direct cooperation with the departments; additional educational training programs on a contractual basis; retraining and advanced training of specialists of an organization by the university staff on a contract basis.

When viewed as a whole, the requirements of employers coincide with graduates' understanding of competences necessary for their work. There are some claims of employers for the application of received university knowledge in practice by graduates, their weak theoretical knowledge on specialization, and other problems.

In this regard, it is necessary to conduct a comprehensive analysis on each group of competencies, identify the causes of problems, and to develop measures to improve educational programs for employers' expectations.

**The results of the interview.** We conducted interviews with five employers (transcripts in the annex).

The survey involved the following companies and institutions from various sectors:

- KGU "Gymnasium № 6 Semey";
- JSC "East Kazakhstan Flour and Feed Mill";
- Medicines Preparation Plant LLP "FC Romat";
- State Institution "Department of entrepreneurship of Semey, East Kazakhstan region»;
- KGU "Secondary school-lyceum № 7".



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Employers noted the need to develop practical skills of graduates, their insufficient level of general competence, analytical skills, communication skills.

Employers have a clear idea of the graduate model, what qualities and competencies a graduate must have.

All organizations - employers are willing to cooperate with the University for the improvement of training specialists.

### 3. Key directions of the activities concerning employability that engage academic staff and students at university

**Career Centers. Center for professional development and career** (further - the Centre) is an authorized structural subdivision aimed to provide assistance for graduates employability.

**The Center for professional development and career** is a structural unit of Shakarim State University Semey, the purpose of which is to promote occupational adaptation, employment, professional development and career growth of students and graduates, as well as improving the quality of professional and personal competence of the faculty and staff.

**Strategic objective of the Center** is the development of variants for employers involvement in the implementation of educational programs, and evaluation of their quality in terms of production and the labor market.

**The Center for professional development and career:**

- ensures the process of planning, organization and registration of all types of practices together with the departments and faculties;
- together with the departments and faculties, the Center signs contracts for carrying out professional practices, memorandums of cooperation with enterprises and organizations aimed to develop employability of graduates;
- together with the departments, the Center distributes students to units for practice; prepares drafts of orders to direct students to their professional practice;
- coordinates the activities of all departments involved in the organization and conduct of professional practice;
- makes orders for the payment of workers of educational institutions and other organizations, who are involved into professional practice' mentorship;
- establishes a connection with the ministries and departments, public organizations and institutions in order to identify the need for specialists in this profile;
- creating a computer database of graduates and potential employers and systematization of data in it;
- organizes alumni allocation procedure (private distribution);
- monitors on the degree of satisfaction of employers
- organizes the work of training seminars for students, graduates and teachers





The Centre, together with the deans of faculties and graduating departments liaise with graduates, collects information about their employment after completing training at the university.

The Centre has developed a documented procedure "Employment of graduates" DP 042-108-2015, which explains how to document the order of activities to promote the employment of university graduates.

### **Workshops/trainings.**

Each year, faculties of Shakarim State University of Semey conduct trainings and workshops for graduate students with participation of employers.

Such measures allow to receive proposals and suggestions from managers of factories and institutions where our graduates work.

In the 2015-2016 the University held Round Table talks on themes: "Challenges and graduate employment problems", "Vocational trainings and employment", "With diploma - to the village!", "Problems of young specialists' employment: government support, labor relations, rights and responsibilities ", "Employment by eyes of students ", " Employment of graduates in modern conditions: training seminars, master classes", "Writing resumes of graduates", "Employment - one of the major problems in human life." Employers' opinions allow to improve educational programs of the University.

Every year in October-November, the university faculties conduct workshops on writing professional resumes by graduates, which are then placed in the university portal "Career Ladder of graduates » (<http://career.semgu.kz>). At the annual Career Day event, students can exchange contacts with managers and specialists of enterprises of the city.

Portal "Career Ladder of graduates" (<http://career.semgu.kz>) is a platform for communication between graduates and employers where the employer can contact a chosen graduate after analyzing his resume.

The University works hard to improve students' employability skills during practice. The professional practice teaches students how to effectively apply their theoretical knowledge. All educational programs include trial practice, two field trips (for teaching professions there is a pedagogical practice in the educational institutions of the region) and a pre-diploma practice. Thus, the student gets work experience by their graduation. At the end of practice, a department carries out the final conference, where there is an exchange of views on the results obtained, decisions on improving content of the practice in order to raise the level of competencies of graduates.

In 2016, the University carried out the following competitions: "The educational market", "Best Intern-students of Shakarim State University of



Semey", "Hope of the Education", "Best Practice Leader"; they allow to motivate all parties involved in the organization of practice.

In 2015-2016, the University entered into 376 contracts for student internships with organizations, 91 contracts with subsequent employment. There were 25 responses from companies on the results of students' practice, all of them positive.

***Assistance provided to students in regard to employability.***

The University conducts activities to support students and graduates in their efforts to develop employability skills. However, today more emphasis is made on employment, due to the fact that the Ministry of Education and Science of the Republic of Kazakhstan, has been tracking this indicator.

One of the main tasks of the university is to develop long-term relationships and partnerships with companies and institutions in the region. It is this partnership which allows:

- to create educational programs, taking into account the wishes of employers;
- to implement a blended learning program in large enterprises;
- to provide practical training in companies and institutions, quality management trainees, trainees from specialist companies;
- to invite leading experts and top executives to lecture university students.

To implement the above mentioned areas, the university formed the Council of employers, whose main task is to assist in the formation of professional competencies of graduates.

Annually, members of the Council of Employers take part in the actions devoted to questions of enhancing the preparation of competent personnel capable to employment following the results of training. Representatives of entities and organizations take part in annual Fair of Graduates and notify the university on the available vacancies at the entities.

On January, 27, 2016 there was organized a session of the Council of Employers on the topic "Institution - Employer: development of the model of a competitive specialist" where participated the leaders of National Nuclear Center of RK, the Department of Food Safety of Regional state enterprise "Republican veterinary laboratory", a branch of the Domestic regional operating management of State Board "KazSelezashita", more than 30 employers of leading enterprises, organizations and establishments of East KZ region.

Annually, the University holds Job Fairs in all areas of training; last year 92 organizations-employers of the East Kazakhstan region, Pavlodar and Almaty regions took part.





Employability level depends on a high-quality educational program. Educational programs of Shakarim State University are designed on competence-based model of training. Competences are developed by the faculty together with employers on the basis of the national frame of qualifications, on industrial frame of qualifications, on professional standards, on the job evaluation catalog of employees.

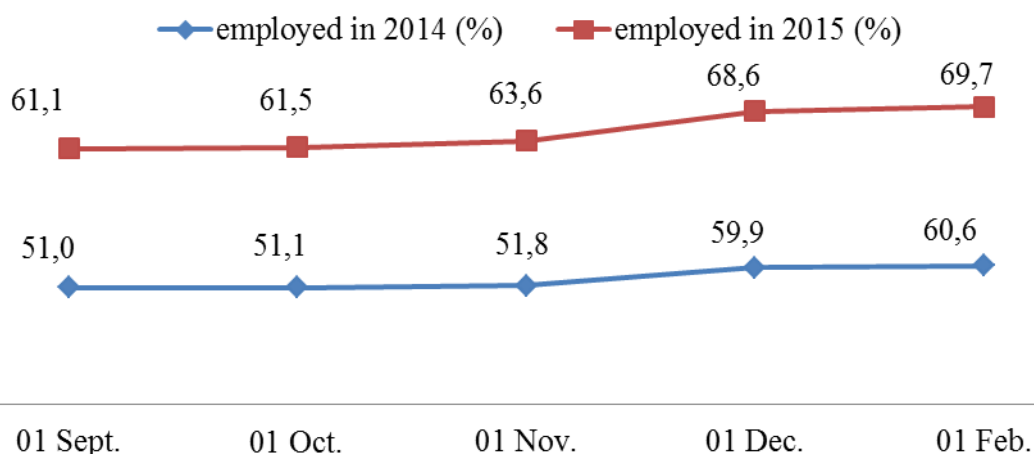
**Analytical work.** Analysis of the Employment dynamics among graduates (on the example of the Shakarim State University of Semey) for 2014 and 2015 years shows that the main contingent of graduates usually get jobs in the first three months after graduation.

Table 3.1 - Dynamics of employment among graduates (SSUS indicators)

Indicators	2014				
	01 Sept.	01 Oct.	01 Nov.	01 Dec.	01 Feb.
Number of graduates:	1100	1100	1100	1100	1100
Employed	561	562	570	659	667
Not employed	262	249	239	127	119
Continued education on the master (i.e. full time)	134	134	134	134	134
Compulsory military service	29	38	38	52	52
On child care	98	101	103	112	112
Other	16	16	16	16	16
	2015				
	01 Sept.	01 Oct.	01 Nov.	01 Dec.	01 Feb.
Number of graduates:	1113	1113	1113	1113	1113
Employed	680	685	708	763	776
Not employed	156	141	109	54	38
Continued education on Master programs (full time)	119	119	119	119	119
Compulsory military service	20	27	32	32	32
On child care	122	125	129	129	129
Other	16	16	16	16	19

Note: Data from SSUS

The employment indicators of graduates of 2014 amounted to 51.0 % on 1 September 2014, and by February 1, 2015 -60.6 %; graduates in 2015, respectively 61.1% and 69.7%.



**Figure 3.1 - Dynamics of graduates' employment (SSUS indicators)**

Note: Data from SSUS

The most part of graduates who have gained necessary knowledge skills become trainees and, subsequently, get jobs in companies during the first three months after graduation.

But the most important information for the analysis and correction of student learning process is received from the results of employers' survey. The University annually monitors the level of employers' satisfaction by the quality of its students and educational processes.

From January 25 to March 31, 2016 Career Centre conducted a study (survey) of pedagogical specialties, the total number was 67 respondents. One of the main objectives of the study was estimation of graduates' quality by employers. 52% of respondents were fully satisfied with the level of training, 19% were not satisfied fully. It is therefore important to understand what are the disadvantages in training.

The surveys' analysis has shown that now the question of possessing the key competences by graduates is equally significant, as well as the question of their possessing professional knowledge for their job profile.

To ensure competitiveness of the university graduate, we need not just strong fundamental and professional preparation, but also develop his\her personal and professional qualities which allow them to adapt in various economic, sociocultural, ethnic and other conditions. That is in modern conditions we need a specialist who possesses flexibility and mobility in the labor market and professions, is capable to make independent



#### **4. Challenges and problems faced by the university as regard employability; ways of solving them; aims and objectives pursued by the university.**

Current legislation of the Republic of Kazakhstan provides for the employment of graduates for certain categories of professions, who studied at the expense of the state educational grant and rural quota.

In this regard University, and the graduates who have finished training in the specified categories are responsible for employment and working off respectively. In this regard, the University conducts work on distribution of graduates.

Law of the Republic of Kazakhstan dated July 27, 2007 №319-III «On education" provides for the obligation of young professionals who have completed the training:

- For educational, medical and veterinary professions, within the "rural quota";

- Pedagogical and medical specialties on the basis of state order;

- For the PhD program on the basis of the state educational order, to work in their respective organizations at least three years after graduating from HEI.

JSC "Financial Center" carries out monitoring and control over young professionals' performance of their duties to work off or reimburse the expenses of budgetary funds provided for by the Law of the Republic of Kazakhstan "On Education".

Not all graduates can find a job immediately after graduation. Employers more often are interested in hiring personnel with experience.

It is more favorable to organizations to employ people with experience. In the conditions of crisis, employers aren't ready to make investments in inexperienced employee who, moreover, have big ambitions, which is a typical image of young employee in the opinion of employers quite ("The Central Asia Monitor" political newspaper 8/21/2015).

Considering tendencies in the labor market, Shakarim State University of Semey has created educational programs aimed at improving competences of graduates which are necessary to raise their employability.

The Center of Additional Education "Lifelong Learning Academy" at Shakarim State University of Semey will develop courses and workshops to increase the employability of graduates.

The perspective directions in the development of graduates' employability are: vocational education, dual degree programs with foreign partner-universities, improvement of programs for professional practice, etc.

## Annex 1

### A list of university departments

Table 1

<b>№</b>	<b>Departments</b>	<b>Code</b>	<b>Specialty</b>
	Economics	5B050600	Economics
		5B011500	Bases of Law and Economics
	Management	5B050700	Management
		5B051000	State and local management
	Accounting and Audit	5B050800	Accounting and Audit
	Finance	5B050900	Finance
	Machines and Apparatus of Food production	5B072400	Technological machines and equipment (by branches)
	Technical Physics and Heating Energetics	5B072300	Technical physics
		5B071700	Heating Energetics
	Technology of Food & Light Industry products	5B072600	Technology and Construction of Light Industry products
		5B072700	Technology of Food Products
		5B072800	Technology of Processing production (by branches)
		5B042100	Design
	Technology of Machine Building and Mechanics	5B071200	Machine Building
	Standardization and Biotechnology	5B070100	Biotechnology
		5B073200	Standardization, certification and metrology (by branches)
	Chemistry	5B060600	Chemistry
		5B072000	Chemical technology of inorganic substances
		5B072100	Chemical technology of inorganic substances



Automation and Electronics	5B070200	Automation and Control	
	5B070400	Computing engineering and software	
Information systems	5B070300	Information systems	
	5B090100	Organization of transportations, motions and exploitation of transport	
Physical Education			
Geodesy and Construction	5B071100	Geodesy and Cartography	
	5B072900	Construction	
	5B073000	Production of construction materials, goods and assembly	
Journalism and practical course of Kazakh language	5B050400	Journalism	
Psychology	5B050300	Psychology	
Theory and Practice of Translation	5B020700	Translation studies	
History of Kazakhstan	5B011400	History	
	5B020300	History	
Philosophy and Political Science	5B050200	Political Science	
Jurisprudence	5B030100	Jurisprudence	
Agrotechnology and Forest Resources	5B080100	Agronomy	
	5B080700	Forest resources and Forestry	
Stock-raising and game-management	5B060700	Biology	
	5B080200	Technology of stock products	



		5B080300	Game management and fur farming
	Veterinary Sanitation	5B120200	Veterinary Sanitation
	Veterinary Medicine	5B120100	Veterinary Medicine
	Ecology and Environmental protection	5B060800	Ecology
		5B073100	Life activities safety and environmental protection
	Foreign Philology	5B011900	Foreign language: 2 foreign languages
		5B021000	Foreign philology
	Russian Philology	5B020500	Philology (Russian)
		5B011800	Russian language and Literature
		5B012200	Russian language and Literature in schools with non-Russian language of instruction
	Kazakh Literature	5B020500	Philology ( Kazakh)
		5B012100	Kazakh language and Literature in schools with non-Kazakh language of instruction
		5B011700	Kazakh language & Literature
	Pedagogy and Psychology	5B010200	Pedagogy and Methodology of Elementary Education
		5B010300	Pedagogy and Psychology
		5B010100	PreSchool Education and Up-bringing
	Music Education	5B010600	Music Education
	Fine Arts and Drawing	5B010700	Fine Arts and Drawing
		5B012000	Vocational Education
	Chemistry and Geography	5B011200	Chemistry
			Geography



		5B011600	
	Biology	5B011300	Biology
	Theory and Methodology of Physical education and Elementary military training	5B010800	Physical Culture and Sport
		5B010400	Elementary military training
	Mathematics and Methodology of teaching mathematics	5B010900	Mathematics
		5B060100	Mathematics
	Physics	5B011000	Physics
		5B060400	Physics
	Informatics and Information technologies	5B011100	Informatics
		5B060200	Informatics