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# **1 THE FUNCTIONING OF UNITE COUNCIL**

## **1.1 UNITE Council Board Members**

The Coordination Council to support the textile education of Belarus was created within the WP1 package as part of the Belorussian Light Industry Concern “Bellegprom”, which combines enterprises producing and selling light industry goods (in the project application – UNITE Council). Vitebsk State Technological University has developed a Draft (Annex), which was considered at the meeting of the department “Spinning of natural and chemical fibers” and the Scientific and Technical Council of Vitebsk State Technological University. The project was approved and recommended for adoption. The Chairman of “Bellegprom” endorsed the draft.

To form the Board of UNITE Council (the Coordination Council to support the textile education as part of “Bellegprom”) a series of consultations was conducted with the chiefs of major textile and garment enterprises in the Republic of Belarus. The representatives of universities-partners of the project visited these enterprises as well as telephoned them and video chatted via Skype program.

These consultations were preceded by a deep analysis of the existing system of interaction that had been developed recently. Employees of Vitebsk State Technological University during 2014 analyzed the following indicators characterizing the interaction:

- the number of students undertaking the internships;
- the number of students assigned to the company during the 5 year period preceding the year of the analysis;
- the research work carried out with the participation of staff and students of universities in every enterprise.

The range of products and production capacity was also taken into account. Information on some of the indicators shown in Table 1.1.

Table 1.1 Indicators of interaction between Vitebsk State Technological University and industrial enterprises

Company	The product range	Number of graduates assigned					Total	The number of students undergoing practical training (2012/2013)
		2009	2010	2011	2012	2013		
1	2	3	4	5	6	7	8	9
JSC «Gronitex»	Cotton yarn (combed from 11.8 to 15.4 tex single and twisted; carded up to 110 tex). Composite yarn (cotton-polyester, cotton-polyacrylonitrile etc.) Sewing threads of different purposes. Cottonine. Cotton-wool.	1	2	2	1	3	9	30
JSC «Vitebsk carpets»	Tufted carpets. Woven carpets. Waste for recycling. Contract coating.	4	3	3	1	0	11	82
JSC “Vitebsk plant of silk fabrics”	Lining fabrics, corset fabric, raincoat, technical	1	1	1	6	1	10	55
JSC “Baranovich Cotton Production Amalgamation”	Cotton fabrics, cotton yarn, knitting and weaving, bed sheets, table linen sets, souvenirs, workwear	1	0	2	2	12	17	18
RCIUE «Orsha Linen Mill»	Fabrics for suits and blouses; for bed sheets, table linen; technical fabrics, ornamental and furniture upholstery; blankets and bedspreads; kitchen kits, etc..	3	6	5	1	1	16	110

1	2	3	4	5	6	7	8	9
JSC “Classic of the fashion industry” (Company was liquidated in 2015)	Hosiery, linen products, knitwear, women’s, teen and children’s tights, leggings; men’s, women’s and children’s socks and stockings; children’s, women’s and men’s underwear (T-shirts, sweatshirts, pants, pajamas), upper knitted garments (gowns, trousers, casual suits, sweaters).	12	12	5	6	7	42	70
JSC «Kamvol»	Semi-woolen worsted fabric and yarn.	3	2	3	1	0	9	24
JSC «Sukno», Minsk	Wool fabrics from carded spinning fibers; Ready made textiles, except apparel		1	1	4	9	15	18
JSC «Lenta» Mogilev	Textile haberdashery (ribbons, cords, laces, hooks and fasteners), curtain cloth products (curtains, tablecloths, tissues, towels) sunblinds, first-aid materials (bandages, harnesses, masks, fixing products), reflective products (arm-bands, belts, flickers)	5	2	1	6	5	19	25
JSC «Mogotex»	Fabrics for industrial wear and uniforms, raincoat, for special equipment and leather industry, lining, decorative, furniture, curtains, for knitting, technical fabrics, and special uniforms Home textiles.	0	7	4	2	6	19	8
JSC «Belfa»	Fleece knit goods (artificial fur): for coats, hats, toys, carnival costumes, leather goods, lining for the shoe and clothing for decorative items. Tailoring of apparel.	1	1	1	0	1	4	11
JSC «Kupalinka»	Knitted underwear (women’s, men’s, children’s, nursery), knitted outdoor (women’s, men’s, children’s)	1	0	0	0	0	1	3
JSC «8 March»	Knitted garments (for women, men, children), knitted underwear, sports jersey, hosiery, knitted fabrics for swimwear	0	2	1	1	1	5	3
JSC «Svitanak»	Men’s knitwear, women’s sweaters; children’s knitwear	0	4	3	0	1	8	24
JSC «SvetlogorskHimvolokno»	Textile and technical viscose thread; polyester textile filament; polyester technical fabrics, viscose cord fabric; heat-resistant Arselon thread and cloth; Carbon fiber materials; polypropylene fabric and non-woven materials	0	0	0	0	1	1	7

1	2	3	4	5	6	7	8	9
JSC «Polesie»	Semi-woolen yarn; fancy yarns; semi-woolen high volume yarn make knitted apparel (for male, female, children, sports)	0	2	3	4	2	11	17
JSC «Alesya»	Knitted garments (for women, men, children), uniforms; souvenirs	0	1	2	0	2	5	14
JSC «Polotsk-Fiberglass»	Glass fibers and its products: electrical and structural glass, constructing and insulating materials, silica products and those made of fiberglass.	0	0	2	1	1	4	20
JSC «Brest Stocking Mill»	Hosiery products	0	1	0	1	0	2	13
JSC «Viet cotton mill»	Cotton and mixed; knitted gloves, including, PVC coated	0	0	0	1	0	1	4
CHUTP «Romgil»	Knitted outerwear for women, men and school children, underwear	0	4	2	0	0	6	2
JSC «Rechitsa textiles»	Towels, sheets, tissues and terry bathrobes; tablecloths and wafer towels; cutlery sets and decorative kits; bedspreads and furniture and decorative fabrics.	1	0	0	0	0	1	7
RUE Smilovich felting factory	Felt boots; shoes made of felt wool	2	0	0	0	0	2	
Flax factories for primary processing of flax (Mosar, Senno flax scutch mill, Gorki-linen, Lyakhovich, Dvoret'sk, Verkhnedvinsk, Morsk, Dubrovno, Lioznensk flax-scutch mills)	Primary processing of flax fiber	4	4	2	4	3	17	18
JSC «Carpets» in Brest	Carpets	1	1	0	0	0	2	2
JSC «Charov'nitsa»	Knitted outerwear	1	0	0	0	1	2	10
JSC «Elma»	Knitted outerwear		1				1	
JSC «Slonim CPP»	Semi-woolen yarn							4
JSC «Kobrin Spinning and Weaving Mill Ruchaika»	Yarn, fabrics for technical use							2
CJSC JV «Sopoteks»	Cotton and blended yarn							1
Colleges, universities		2	2	2	-	1	7	
Total		44	59	45	42	58	248	602

The following companies saw a lot of significant studies, and researches in their manufacture conditions:

- 6 RCIUE “Orsha Linen Mill”.
- 7 JSC “Gronitex”.
- 8 JSC “Mogotex”.
- 9 JSC «Lenta».
- 10 JSC «Svitanak».

The existence of the branch of university department at the enterprise was one of the most important factors to consider when creating UNITE Council.

Department Branches were created at JSC “Vitebsk Carpets”, JSC “Charovnitsa”, JSC “Classic of the fashion industry”, JSC “Vitebsk plant of silk fabrics.” The branch, functioning at RCIUE “Orsha Linen Mill” is converted into a training, research and production complex.

When counselling with businesses the leaders discussed the goals and objectives of the project, the issues of further development of cooperation in the field of education and scientific research, the existing problems of interaction.

Having analyzed the interaction and the counselling “Bellegprom” got a letter with the list of companies and organizations, whose representatives would be advisable to include in the Council of UNITE.

On the basis of the letter (order № 173, December 3, 2014) the Chairman of the Concern “Bellegprom” M. Yafimchyk approved the following composition of the Coordination Council to support the textile education (UNITE Council):

1. Mykalai Yafimchyk – Chairman of the Concern “Bellegprom”, Chairman of the Board.
2. Vincent Adamovich – Deputy Chairman of the Concern “Bellegprom”.
3. Iryna Lapchanka – Head of Coordination of textile industry development “Bellegprom,” Secretary of the Board.
4. Valery Bashmetau – Rector of EI “Vitebsk State Technological University”, Prof..
5. Dzmitry Ryklin – Head of the Department of Textile Technology of EI “Vitebsk State Technological University”, Prof..
6. Aljxandr Nosikau– First Vice Rector of EI “Mogilev State University of Foodstuff”, PhD, associate professor.
7. Leonid Scherbina – Head of the Department of Chemical Technology of High-molecular Compounds, EI “Mogilev State University of Foodstuff “, PhD, associate professor.



8. Viktor Sadovski – Vice-Rector of EI “Belarusian State Economic University,” Prof.
9. Tatsjana Silich - Director of the Research Center of Light Industry.
10. Sjargei Papou – Chief Engineer of JSC “Vitebsk carpets”
11. Igar Yeshchanka – Head of Department of Assortment Development and Advertising of RCIUE “Orsha Linen Mill”.
12. Petr Skachkou - Chief engineer of JSC “Mogotex”.
13. Natallja Drozd – Deputy General Director for Ideological Activity at “Lenta”
14. Anatoly Zaleuski – Chief Engineer of JSC “Gronitex”.
15. Nikolay Reznik Deputy Director General of Operations of JSC “Baranovich Cotton Production Amalgamation”.
16. Lidia Malejczyk – Chief Technologist at spinning factory JSC “Polesie”.
17. Svetlana Stryzhak – Chief Engineer of JSC “Kamvol”.
18. Tatsjana Radyuk – Chief Engineer of JSC “Alesjya”.
19. Svjatlana Samstyko – Chief Engineer of JSC “Svitanak”

## **1.2 The First Meeting Minutes of Coordinating Board on the support of textile education (UNITE Council)**

**Date:**

February 19,  
2015

**Venue:**

Minsk, concern “Bellegprom”

**Chaired by:**

M. Yafimchyk

Chairman of the Concern, Chairman of the Board

**Attended by:**

V. Payeuskaya

Vice-Head of the Department of Coordination of Textile Branch Development

N. Kavaleuskaya

Lead Specialist of the Department of Coordination of Textile Branch Development

V. Bashemau

Rector of Vitebsk State Technological University

D. Ryklin

Head of the Department of Textile Technology of Vitebsk State Technological University

A. Nosikau

First Vice-Rector of Mogilev State University of Food-Stuff

L. Scherbina

Head of Chemical Technology of High-Molecular Compounds of First Vice-Rector of Mogilev State University of Food-Stuff

V. Sadovski

First Vice-Rector of Belarusian State Economic University

T. Silich

Director of Research Centre of Light Industry

S. Papou

Chief Engineer of OJSC “Vitebsk Carpets”

I. Yeschanka

Head of the Department of Assortment Development and Advertising of Orsha Linnen Mill

P. Skachkou

Chief Engineer of OJSC “Mogotex”

N. Drozd

Deputy General Director for Ideological Activity of OJSC “Lenta”

L. Maleychik

Chief Technologist of OJSC “Polesie”

N. Radzuk

Chief Engineer of OJSC “Alesya”

S. Samstyka

Chief Engineer of OJSC “Svitanak”

A. Dyagileu

Associate Professor of Department of Information Technology of Vitebsk State Technological University



Figure 1.1 – The First Meeting Minutes of Coordinating Board on the support of textile education

#### **Agenda:**

- The project – Tempus International “University and Industry for the Modernization of the textile manufacturing sector in Belarus” The results obtained in 2014 and tasks for 2015.
- Speaker: Dzmitry Ryklin, Head of the Department of Textile Technology of “EI “Vitebsk State Technological University”, Prof.
- Designing of textile materials characteristics.
- Speaker: Andrey Dyagileu, Associate Professor, Department of Information Technology, EI “Vitebsk State Technological University”, Ph.D.
- Interaction among the enterprises of “Bellegprom” concern and higher education institutions to implement the plan of students’ enrollment to specialties on the profile of textile and light industry.

Speaker: Valery Bashmetau, Rector of the EI “Vitebsk State Technological University”, Prof.

Apart from the agenda a number of proposals on the development of a joint action plan were considered. “Bellegprom” and educational institutions of the Republic should interact to ensure the textile industry with qualified specialists and together solve the problems of popularization of Textile studies in order to attract students on textile specialties.

RECOMMENDED TO:

1. “Bellegprom” (HR Department):

1.1. Together with the companies- members of the concern decide upon the question how to get to a full-time educational training program the staff, according to Plan of the Enrollees into EI “Vitebsk State Technological University”;

1.2. Develop a program of interaction between “Bellegprom” and specialized educational institutions of the republic to provide it with highly qualified staff;

1.3. Schedule workshops in the regions (at the enterprises of the concern) to improve the skills of mid-level staff of enterprises of “Bellegprom” in each region;

1.4. Organize the distance learning and online conferences provided by educational institutions to enterprises of the concern.

2. Heads of the enterprises of the concern “Bellegprom”:

2.1. Ensure the participation of enterprise staff in advanced training courses at least once every 5 years;

2.2. Organize targeted training of employees at profiled universities of the country;

2.3. Provide timely information to the profiled educational institutions of the needs in specialists.

3. Take into account the information prepared by Andrey Dyagileu, Associate Professor of Information Technology, the PhD in technical sciences, EI “Vitebsk State Technological University” on the designing of textile materials characteristics based on Republic Commercial Industrial Unitary Enterprise “Orsha Linen Mill”.

### **1.3 The Second Meeting Minutes of Coordinating Board on the support of textile education (UNITE Council)**

**Date:**  
March 30, 2016

**Venue:**  
Minsk, concern “Bellegprom”

**Chaired by:**  
M. Yafimchyk      Chairman of the Concern, Chairman of the Board

**Attended by:**

I. Lapchanka	Head of Coordination of the textile industry “Bellegprom”
N. Kavaleuskaya	Lead Specialist of the Department of Coordination of Textile Branch Development
V. Bashemau	Rector of Vitebsk State Technological University
D. Ryklin	Head of the Department of Textile Technology of Vitebsk State Technological University
A. Nosikau	First Vice-Rector of Mogilev State University of Food-Stuff
L. Scherbina	Head of Chemical Technology of High-Molecular Compounds of First Vice-Rector of Mogilev State University of Food-Stuff
V. Sadovski	First Vice-Rector of Belarusian State Economic University
T. Silich	Director of Research Centre of Light Industry
A. Zaleuski	Chief Engineer of JSC “Gronitex”
I. Yeschanka	Head of the Department of Assortment Development and Advertising of Orsha Linnen Mill
P. Skachkou	Chief Engineer of OJSC “Mogotex”
N. Drozd	Deputy General Director for Ideological Activity of OJSC “Lenta”

Three issues were in focus:

1. The role of interaction between educational institutions and “Bellegprom” in the process of young specialists’ assignment to the enterprises of light industry.
2. Problems of advanced/further training for the staff of those enterprises which are part of “Bellegprom”.
3. Personnel policy concept of “Bellegprom”.

A. Kavalenya, the head of the HR department of “Bellegprom”, reported on the first question. He drew attention to the problems of industry in human resources.

In particular, he noted that the staff needs in specialists and young professionals in particular reduced almost doubly. He highlighted that, despite the difficulties, the company is executing orders of the Head of State, received at the

meeting on March 10 to provide every graduate of each educational institution with the first workplace.

The chairman of the Concern, M. Yafimchyk, discussing the first question set Human Resources Department (Kovalenya A.) the following goal:

Within a month (April 2016) develop and approve a sectoral program "Human Resources 2016-2020";

Considering a complete absence of system of retraining, require the companies to report on what is done for that, as well as what is being done with the reserve for the nomination;

Unify the qualification requirements for managers and employees of marketing and external services of the concern enterprises;

In order to ensure the execution of the President's orders to provide graduates of educational institutions with the first workplace, to organize a meeting on the basis of the concern with the heads of personnel departments of enterprises.

Discussing the graduates' assignment the representatives of educational institutions and enterprises specified the following problem: a number of positions and professions require training of employees at the level of higher education. University graduates are willing to take such positions, but the positions of national classifier "Professions of workers and positions of employees" fall under the category of working professions, which prevents the graduates' assignment in these positions. In particular, it concerns such a position as an assistant master. Making changes to classifier partly will solve the problem of assignment of young professionals.

In this regard, the chairman tasked the Human Resources Manager to initiate in collaboration with the Ministry of Education changes to the classifier.

Discussing the second question, the Chairman set of the following tasks:

As part of the sectoral program "Human Resources 2016-2020" prepare a work plan with a reserve for the nomination, on a mandatory basis providing regular training and retraining of persons included in it.

Ensure a constant link with companies to have the applicants annually for all textile educational institutions that train personnel for light industry.

Ensure effective professional work of enterprises in cooperation with educational institutions to attract the youth into the industry.

## **2. ACTIVITIES OF VSTU SUBDIVISIONS RELATED TO PROBLEMS OF INTERACTION**

### **2.1 Offices of Vitebsk State Technological University**

#### **2.1.1 Correction of those staff instructions, whose functions include interaction among enterprises**

Having analyzed the functions of employees at structural subdivisions of Vitebsk State Technological University, whose activities deal with the interaction processes with enterprises, in March 2015, several Job profiles suffered changes, mainly: Job descriptions of the head of marketing department and specialists.

In view of these changes *Head of Marketing Department* will perform the following duties:

1. Comply with the University policy on quality, Health Safety and Environment at work, the documents of quality management systems, environment safety and health.
2. Cooperate with the employer on the issues of quality assurance, Health Safety and Environment at work in accordance with the current legislation of the Republic of Belarus.
3. Participate in the development and amendment of documents of quality management systems, Health Safety and Environment at work within the competence of the head, in accordance with current standards in the Republic of Belarus.
4. Ensure operation of the quality management system, management of Health Safety and Environment of his unit.
5. Organize marketing research of the labor market of the republic, region, industry, and demand for specialists graduating from the University; correspond with companies on those issues.
6. Provide a rational organization of the development and adjustment of the forms of contracts for training together with a lawyer.
7. Keep the register of training contracts.
8. Keep the register of sent tuition fee invoices.
9. Organize accounting for cash receipt, processing and systematization of data on the received funds for training.
10. Sign long-term contracts for training with republic enterprises.

11. Prepare the information about the Contracts required for the job assignment commission.

12. Prepare materials about the job placement companies in accordance with Contracts and requests from enterprises (companies) for job assignment commissions (together with the head of HR department).

13. Supervise the documents granting discounts to low-income students (together with the deans).

14. Sign the invoices for students' payment of compensational classes (those missed without a valid reason).

15. Search for new available work positions using the analysis of young specialists requirements gained from the enterprises in accordance with the signed agreements on training.

16. Keep the register of applications for reassignment and employment of university graduates those who are unemployed for various reasons (together with the deans and graduate department).

17. Study the enterprises views on the university graduates and the VSTU's impact on first job placement.

***Specialist of Marketing will perform the following duties:***

1. Comply with the University policy on quality, Health Safety and Environment at work, the documents of the quality management systems, Health Safety and Environment at work.

2. Cooperate with the employer on the issues of quality assurance, Health Safety and Environment at work in accordance with the current legislation of the Republic of Belarus.

3. Develop and amend the shape of contracts for tuition, develop forms of tuition fee invoices.

4. Execute a contract, an additional agreements to the contract for training in accordance with the "Regulations on the procedure for concluding agreements for the training of specialists with higher education on terms of payment", approved by the Ministry of Education of the Republic of Belarus on 21.01.2008 №5.

5. Keep the register of contracts for training.

6. Prepare and send tuition fee invoices.

7. Conduct the monitoring of compliance with the conditions of the concluded contracts.

8. Assist with concluding of training agreements commercial and public ones.



9. Terminate the contract for training of specialists in case of students' withdrawal or their failure to meet contractual obligations.
10. Conduct in the prescribed manner the planned accounting and reporting documentation.
11. Participate in marketing research of the labor market of the region and industries.
12. Prepare the necessary information on Contracts for the work of the commission for job assignment.
13. Prepare all necessary information on Contracts for the enrollment commission.
14. Perform individual service orders of his immediate supervisor.
15. Contain the workplace in accordance with the rules of labor protection and fire safety.
16. Clarify the demand for specialists at the enterprises in accordance with the signed agreements on training.
17. Keep the register of applications for reassignment and employment of university graduates unemployed for various reasons (together with the deans and graduate department).

### **2.1.2 Organizing internships at the enterprise**

As the students' and teachers' questioning showed, the main issue of interaction between VSTU and enterprises is the organization of internships. Regarding carrying out of internships teachers interact with university departments in 30% of cases.

The role of internships of young specialists for industrial enterprises can not be overestimated. In fact, every graduate is assessed according to his or her practical skills especially at the first stage of his career. However, more than 66% of experienced specialists believe that graduates lack of practical skills. No one graduate agreed with the statement that a student can get practical skills only within the walls of university. Young specialists estimated the benefit from internships higher than that from the laboratory work. However, more than 40% of the respondents believe that practical skills can only be obtained after the graduation while working at the enterprise. This indicates universities' faults in the educational process management.

To the question "What kind of assistance should companies provide to universities?" More than 20% got the answer "Providing all technological information on request from the university and within the internship."

On the one hand, the restriction of access to technological information is a part of the policy of any industrial enterprise. However, without the provision of information to educational institutions, and to students in particular, it will be impossible to prepare a competent specialist. In this regard, as a result of the survey, this problem was one of the most important issues of interaction between companies and universities.

The positive results of the survey was the fact that none of the respondent considered a complete refusal to provide information to be necessary. Only 36% of specialists of enterprises believe that within the internship, students can gain access to economic information required to perform a coursework or a diploma project. 6.7% clearly believe that providing this information is unacceptable.

The vast majority of the respondents were in favor of possible limited access to economic information. That answer demanded mandatory explanations. In this regard, the majority of the specialists noted that the actual economic information (financial reports) may be a piece of "commercial confidentiality." Also, it was suggested that the provision of information is possible if the student uses it for its intended purpose. However, neither the university professors nor specialists of the enterprises are able to establish how the student will use the information obtained.

The majority of the respondents (almost 68%) believe that the list of required information must be agreed with the University's and enterprise management. For the time being there is no procedure of approval.

In connection with this there was developed an application to the internship program which should be approved by the executives of the companies where the students are sent for practical training.

Below is an example of such an application to the internship program approved by the management of "Gronitex".

**A) List of information agreed to provide to the student during the internship.**

**1. General Information**

- 1.1. General characteristics of the enterprise, its activities, the history of development.
- 1.2. The organizational structure, management system.
- 1.3. Characteristics of the main and auxiliary production.
- 1.4. The product range, its field of application. The main consumers of products.

## **2. Technological section**

- 2.1. Design and operation of warehouses. Rules for acceptance-delivery of raw materials.
- 2.2. Technological processes and equipment for production of yarn (fabrics, knitwear, non-wovens).
- 2.3. The list of technological equipment.
- 2.4. Plans for spinning, adopted at the enterprise (according to individual orders).
- 2.5. The technical documentation for the equipment (passport, the instruction manual).
- 2.6. Quality-test for raw materials, semi-finished and yarn. Organization of the input and output testing laboratories.
- 2.7. Testing of the technological process.
- 2.8. Organization of equipment maintenance (repairs, cleaning, lubrication).
- 2.9. Standard output for semi-finished and yarn. Waste nomenclature.
- 2.10. Technologies and equipment for waste processing.
- 2.11. Working methods during refueling and equipment maintenance (service).
- 2.12. Jobs descriptions and responsibilities of assistant fore responsibilitiesief of department.
- 2.13. Organization of internal fabric transport.
- 2.14. The program of enterprise development.

## **3. Health, safety and environment section**

- 3.1. System of labor protection at the enterprise, type and content of safety training.
- 3.2. Regulatory documents on labor protection.
- 3.3. Fire safety measures.
- 3.4. Ventilation and air-conditioning.
- 3.5. Energy saving measures (energy management at the enterprise).
- 3.6. Technologies and equipment for the protection of the environment from harmful emissions and pollutants. Control of the concentration of impurities.

## **4. Economic section (according to individual orders).**

- 4.1 The calculation of the service standards and the performance standard for workers.
- 4.2 Payroll accounting for basic production and auxiliary workers employed, wage system. The tariff rates applied at the enterprise.
- 4.3 Cost of raw materials and waste production.
- 4.4 The cost of basic technological equipment.
- 4.5 The calculation of the cost of production (manufacturing cost).

4.6 Technical and economic indicators of the enterprise (production in volume and value, productivity, cost of fixed and current assets, profitability, etc.).

4.7 Manufacturing program.

**B) The acquisition of practical skills by students.**

1. Students grasp working methods (work as trainee equipment operators) – for 1 week.
2. Master organizational and management skills (work as a trainee foreman) – for 1 week.

**2.1.3 Adjustment of curricula taking into account the recommendations of the industrial enterprises**

The survey of VSTU students and specialists of textile enterprises found that about 78% of all groups of the respondents believe that the level of education received at high school partially meets the requirements of modern production. At the same time it can be increased by a young specialist during the work experience.

55% of young specialists, those who have worked for at least 5 years, say that the content of special disciplines of the university corresponds to the current state of manufacture only partly, the lecture material contains in part outdated information. And 13% believe that training is completely divorced from reality.

More than 77% of the surveyed teaching staff of VSTU believe that to be satisfied with the level of graduates training enterprises should actively participate of in the improvement of the educational process.

In connection with that we face the need to adjust training programs with the participation of enterprises.

An example of such adjustment was the joint work of teaching staff of the department "Textile Technology" of VSTU and "SC "Polotsk-Fiberglass" specialists. "In July 9, 2015 th's enterprise sent the following letter:

*Joint Stock Company "Polotsk Fiber Glass" is the basic enterprise, where our students undergo all kinds of practical training, and go on working as specialists after graduation, showing nice theoretical training. Conversations with students show that in the curriculum of specialty 1-50 0101 "Technology of yarn, fabrics, knitted fabrics and non-woven materials" does not fully cover glass production and glass fabrics, so we would like to add following topics.*

*I. Supplement the academic map on the discipline "Spinning technology" (specialization 1-50 0101 02 "Spinning fibers") with the following information"*

*Basic properties of glass and basalt fibers. Application area.*

*Basic information about the methods of production of glass and basalt fiber.*

*Technology features of unwinding and doubling glass and basalt threads on modern equipment. Technical characteristics of modern equipment for the production of glass and basalt fibers.*

*II. Due to the technical re-equipment of weaving manufacture of the Republic of Belarus it is necessary to make the following changes in academic map on the discipline "Quality Technology" (specialization "1 010 104 -50 "the technology of fabrics") and "supplement it with the following:*

*11. Give detailed information on the features of assemblies and mechanisms of leading foreign companies looms (Picanol, Dornier, Tsudacoma, Toyota, Vutsi al.).*

*2. Add information on the types of winding devices, especially their design depending on the type of fabrics and nets).*

*3. Add information on the types of weft storage systems and their characteristics depending on the type of weft.*

*4. Add information on the types of edge forming devices.*

*5. Add details on foreign companies carriages and their characteristics.*

Taking into account the recommendations in a letter the curriculum for the course "Processing of man-made fibers and yarns" for students of the specialty "Technology of yarn, fabrics, knitted fabrics and nonwovens" (specialization "Spinning of natural fibers") was changed. The changes affected the content of the theme "Spinning of man-made fibres and yarns" (table 2.1).

Table 2.1–Content of the topics " Chemical fibers and threads manufacturing "

The content of the topic before adjustment	The content of the topic after adjustment
<ol style="list-style-type: none"> <li>1. Methods of making man-made fibers and yarns.</li> <li>2. Preparation for extrusion. Extrusion of cellulose fibers.</li> <li>3. The main types of synthetic fibers and their properties.</li> <li>4. Preparation and extrusion of synthetic fibers.</li> <li>5. The main types of synthetic fibers and their properties.</li> <li>6. Analysis of structure and operation of equipment for spinning of man-made fibers and processing lines for tows.</li> <li>7. Analysis of the main properties of man-made fibers and methods for their detection.</li> </ol>	<ol style="list-style-type: none"> <li>1. Methods of making man-made fibers and yarns.</li> <li>2. Preparation for extrusion and extrusion of the cellulose fibers.</li> <li>3. The main types of synthetic fibers and their properties.</li> <li>4. Preparation and extrusion of synthetic fibers.</li> <li>5. The main types of synthetic fibers and their properties.</li> <li>6. <i>Technology of production of glass and basalt fibers. The basic properties of glass fibers and materials on their basis.</i></li> <li>7. Analysis of structure and operation of equipment for spinning of man-made fibers and processing lines for tows.</li> <li>8. <i>Features of the process of unwinding and twisting of fiberglass. Analysis of the equipment used.</i></li> <li>9. Analysis of the main properties of man-made fibers and methods for their detection.</li> </ol>

*Note: Questions written in italics, are added to the program*

The curriculum was reviewed and approved at the meeting of the department of Textile Technology September 1, 2015.

Substantially they revised the curriculum for the course "Technology and equipment for fabrics" for the students of specialty "Manufacture of textile materials" (specialization "Technology and Management of weaving" and "Artistic design of fabrics"). The table 2.2 shows the additional questions included in the course topics.

Table 2.2 Issues covered in the course "Technology and equipment for fabrics"

Subject	Additional questions
2.3. Basic controls	New of the wrap let-off motion
3.2. Trade arrangements	Prospects for the development of trade mechanisms looms.
4.3. Mechanisms of fancy shaft	New mechanisms of fancy shaft of foreign production.
4.4. Jacquard machines	New jacquards
5.2 Weft-insertion (inlay) with projectile	Brief description of the foreign machines with projectile
5.3 Jet-propelling loom	Characteristic of the modern jet-propelling loom.
5.4 Hydraulic loom	Foreign companies - manufacturers of hydraulic loom—.
5.5 Rapiere weaving loom and pneumorapiere weaving loom	Major foreign companies - manufacturers of rapier looms. —atures of weft-insertion on foreign firms rapier looms. Application of multi-weft devices on rapier weaving looms.
6.2 Lay (sley) motion.	Ways to improve mechanisms for the weft battening to the fell of the cloth.

We also added to the list of sources for students mastering the curriculum material. Additional list includes the following sources:

1. Catalogue of the company «Picanol», [www.picanol.be](http://www.picanol.be).
2. Catalogue of the company «Sultex», [www.sultex.com](http://www.sultex.com).
3. Catalogue of the company «Tsudacoma», [www.tsudacoma.co.jp](http://www.tsudacoma.co.jp).
4. Catalogue of the company «Toyota», [www.Toyota-industries.com/textile](http://www.Toyota-industries.com/textile).
5. Catalogue of the company «Dornier», [www.lindauerdornier.com](http://www.lindauerdornier.com).
6. Catalogue of the company «SmitTextile», [www.smit-textile.com](http://www.smit-textile.com).
7. Catalogue of the company «Pomatech», [www.promatech.it](http://www.promatech.it).
8. Catalogue of the company «VandeWiele», [www.vandewiele.com](http://www.vandewiele.com).
9. Catalogue of the company «Staubli», [www.staubli.com](http://www.staubli.com).
10. Catalogue of the company «Grosse», [www.grosse-jac.com](http://www.grosse-jac.com).
11. Catalogue of the company «ROJ», [www.roj.com](http://www.roj.com).
12. Catalogue of the company «LGL», [www.lgl.it](http://www.lgl.it).
13. Catalogue of the company «I.Muller», [www.mueller-frick.com](http://www.mueller-frick.com).
14. Catalogue of the company «Panter», [www.panter.it](http://www.panter.it).
15. Catalogue of the company «Starlinger», [www.starlinger.com](http://www.starlinger.com).

#### 2.1.4 A list of problems for students' research work and diploma work

Experts of textile enterprises are critical of the R&D done as part of research theses. A quarter of those experts surveyed highly appreciated the level of R&D carried out by universities' staff, but nearly 53% consider the level of these works to be intermediate. They say the researches do not always correspond to the needs of the enterprises.

About 28% of the specialists say that universities are too far from manufacture problems.

To bridge the gap between research subjects and the needs of companies it was proposed to develop a list of problems that students could solve as part of their research thesis. Over 88% of university teaching staff voted for the creation of such a book of problems.

In this connection, relevant requests were sent to all the enterprises of "Bellegprom". The following companies responded:

- RCIUE "Orsha Linen Mill"
- JSC "Baranovich Cotton Production Amalgamation;
- JSC „Rechitsa Textile“;
- JSC „Marta“.

The listed enterprises proposed to solve the following problems as part of research theses:

**1. Development of new technology for the flax fiber processing, including recommendations on the choice of necessary equipment. Development of the product range.**

When developing a technology it is necessary to achieve the profitability of 25%, to provide a choice of high-performance equipment, to ensure production output, popular in the domestic and foreign markets. The planned volume of short fiber is 15 thousand tons per year.

**2. Determination of the method of waste recycling from spinning, without spinnable fiber in its composition (containing pieces of leaves, stalks, cotton seeds, short fly up to 8 mm, dust).**

As a result of cotton fiber production regenerated from waste spinning, released on the production lines, as well as the production of nonwovens (batts) a new type of waste is formed (picker waste of second pass), which consists mainly of wastes located originally in cotton fibers (pieces of leaves, stems, cotton seeds, short fly up to 8 mm, dust). Its further processing in spinning mill – is not possible.



In this regard, a new product should be developed from waste. This product will be used later in any other manufacturing field, construction and agriculture.

Every month the mill generates up to 30 tonnes of such wastes which are baled in of 300 – 320 kg. The content of waste is: 80% - pieces of leaves, stems, cotton seeds; 8% - short down up to 8 mm; 2% - dust.

**3. Preparation of the loop weave structure at one side, weft lay at the other, the development of full-scale and reduced-scale quill (pirn).**

When a loop is formed not 3-4 wefts but much more should be in the structure. At one side there should be a looped weave, at the other – weft decks.

**4. Obtaining of the loop weave structure with multi-level loop (not full width of the product), and the development of reduced-scale quill.**

The fabric structure should have areas with high loops.

**5. Obtain the variation of the sheet width and stretching properties using different species of elastomeric yarns.**

When using thick elastomeric filaments in the fabric of different manufacturers we can observe different width and variations of sheet/cloth stretching properties in width. Evaluate the parameters of fabric with different elastomeric yarns.

**6. Estimate the effect of various yarn spinning systems on the parameters of the finished fabric (width, surface density of the web).**

When using the yarn of one number of different systems of spinning after final finishing the fabric can have different width, and surface density. Define the relationship between the properties of different yarn spinning systems and sheet/cloth parameters.

**7. Reducing of twist in products after wet treatment of fabrics from flat fabric (jersey) (bayadere in particular).**

After washing the product the twisting of side seams can go up to 4-5 cm. Make recommendations on knitting and finishing of fabrics to reduce twisting.

**8. Improving the technology of finishing of knitted fabrics containing elastane and polyester threads to reduce harmful emissions into the atmosphere during heat setting and drying of cloths.**

When fabrics containing polyester and elastine yarns are cured and dried, smoke fills the workrooms and products of combustion with unpleasant smell are

released into atmosphere. Make recommendations upon finishing fabrics containing elastane yarns, when it is possible to reduce the harmful effects on the environment and the working area.

### **9. Improving the technology of dyeing fabrics containing polyamide elastane yarns with acid dyes**

Certain types of acid dyes (eg fluorescent) have a low colorfastness to wet treatments. Make recommendations on the dyeing technology, the use of textile auxiliaries for resist dyeing.

These objectives are included in the list of the diploma projects of 2015/2016 and 2016/2017 school years.

#### **2.1.5 Career Center of Vitebsk State Technological University**

To assist students in finding employment on the site of Vitebsk State Technological University we established “Career Center”.

The main objective of the Centre is building relationships with community of employers for students and graduates of EI “VSTU” to be successfully employed.”

Opportunities offered by the Career Center:

- posting vacancies, places of internship and training on the website.
- staff search in the resume database for undergraduates and graduates of EI “VSTU.”

Location of this page: <http://vstu.by/ru/studentu/career>.

You can get there from home page of the University as well <http://vstu.by/ru/> (Figure 2.1).

Access to the “Career Center” from the home page of the University website.

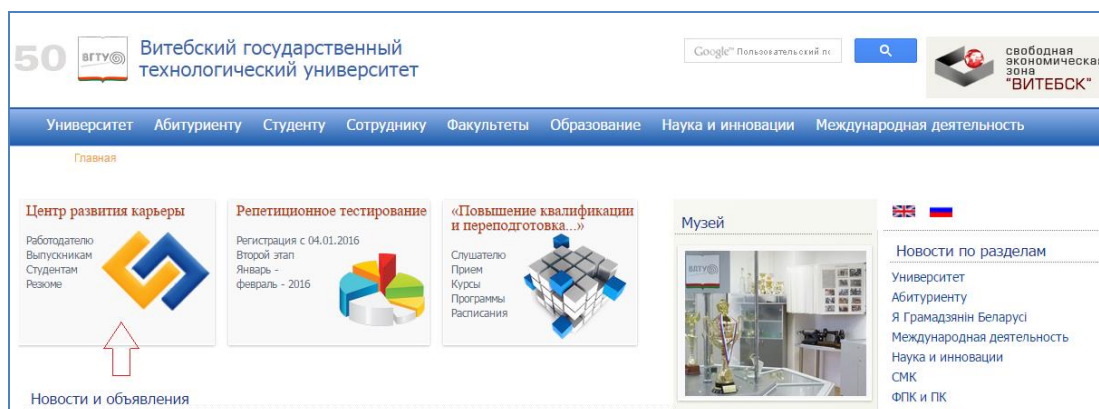


Figure 2.1 – Access to the “Career Center” from the home page of the University website

The main window of the Centre is presented in Figure 2.2. It contains the logo of UNITE project.

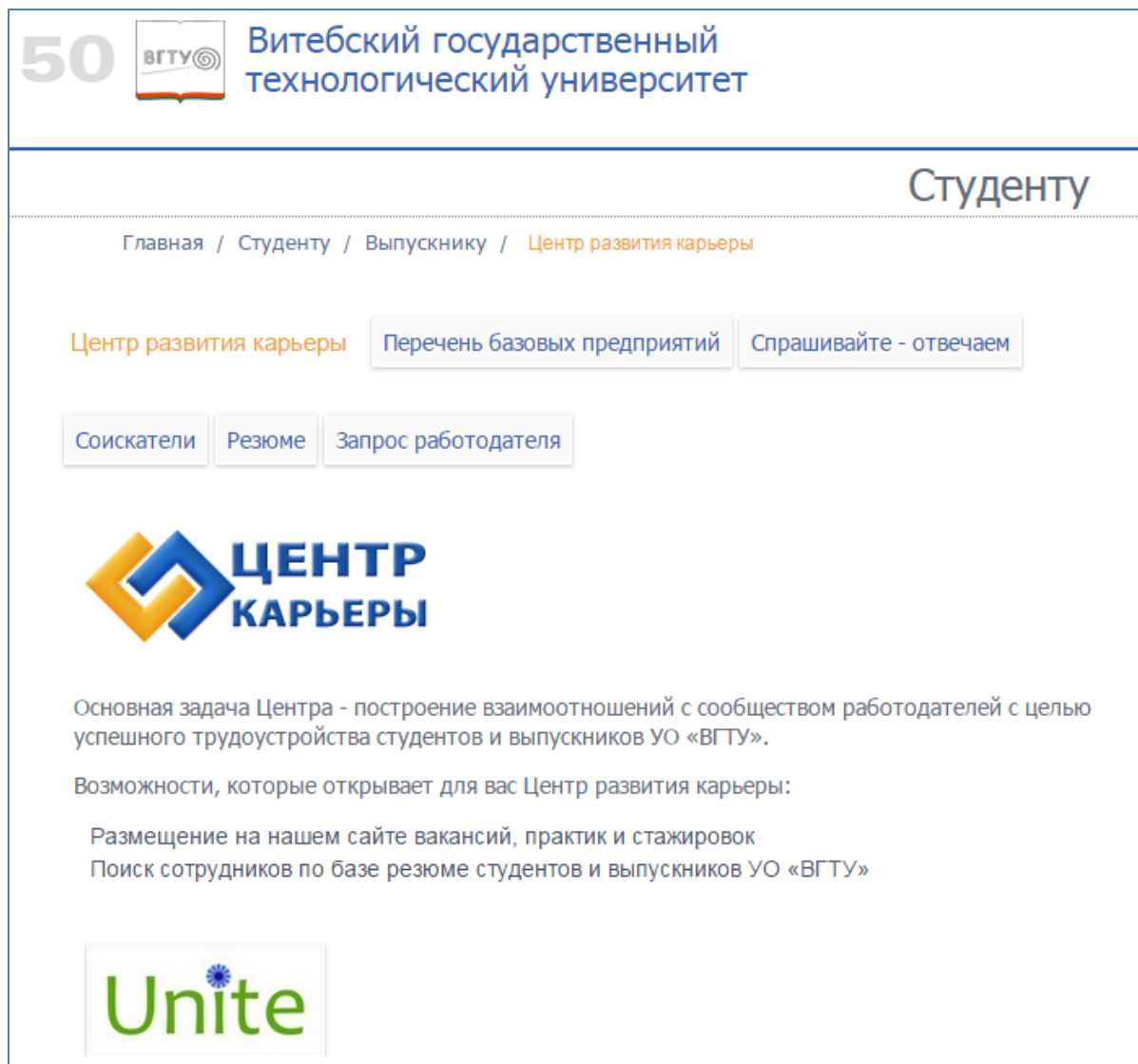


Figure 2.2 – Main Window of the Center

Human resource departments of enterprises and organizations can know the amount of students in various fields who are interested in employment (Figure 2.3). According to the selected direction, you can see the list of students (Figure 2.4), as well as students interested to download CVs in format \* .doc (Figure 2.5).

[Соискатели](#)[Резюме](#)[Запрос работодателя](#)

## Список отделов

### Департамент информатизации

Количество соискателей: 1

### Конструкторско-технологическое направление

Количество соискателей: 0

### Механико-технологическое направление

Количество соискателей: 1

### Художественно-технологическое направление

Количество соискателей: 5

### Экономика и управление

Количество соискателей: 2

[Не нашли нужного соискателя? Отправьте нам свой запрос.](#)

Figure 2.3 – The list of areas in which students are taught (the amount of CVs is shown separately as for 01.01.2016)

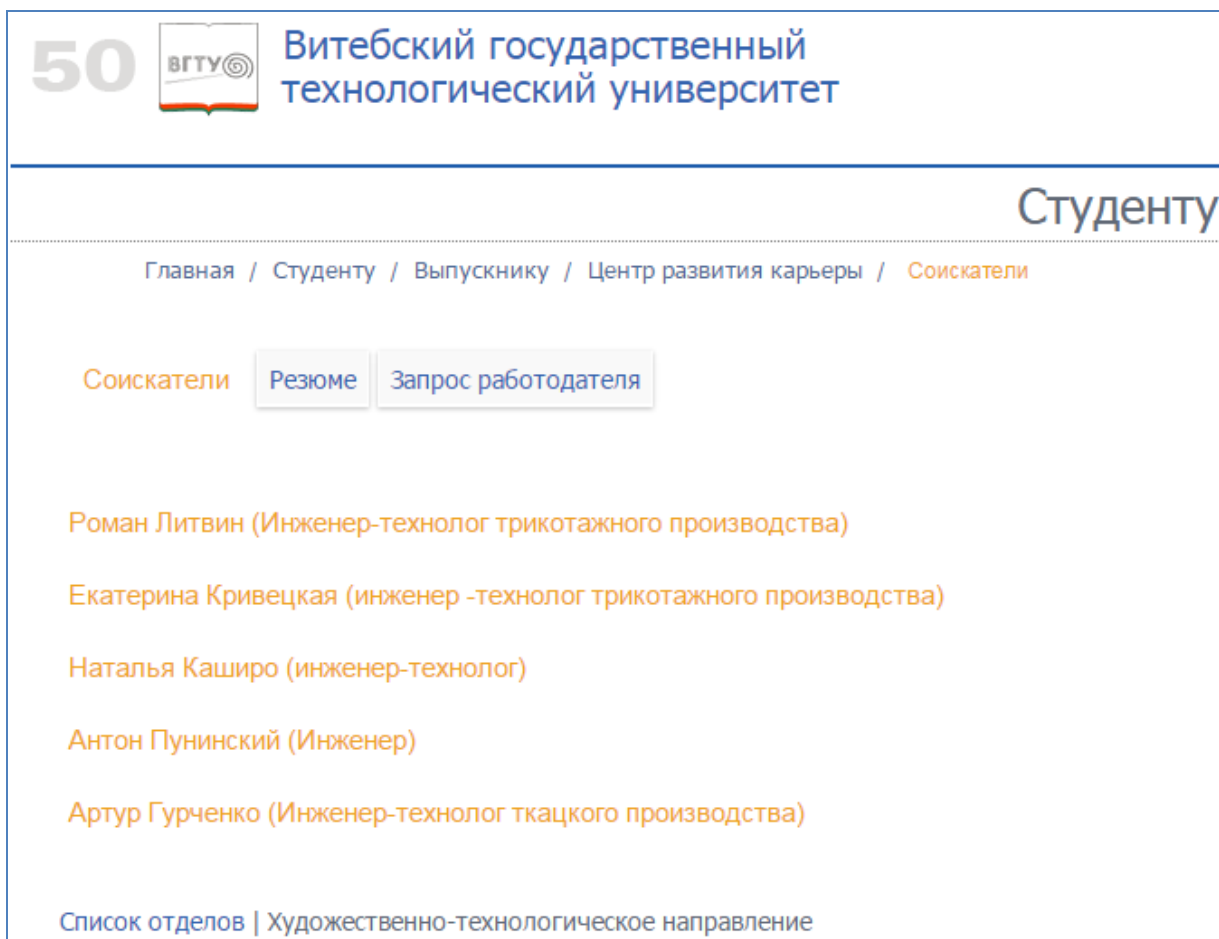


Figure 2.4 – List of students enrolled in the artistic and technological courses who downloaded their CVs.

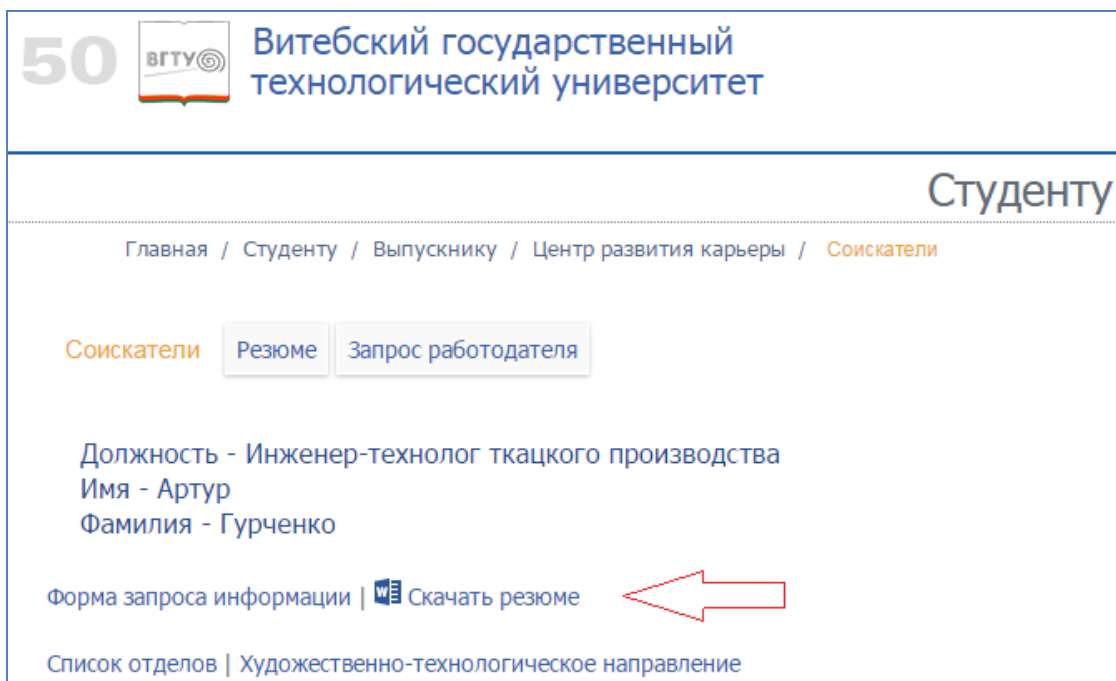


Figure 2.5 – Access to student Resume

Students perform the registration of their CV forms in the window shown in Figure 2.6.

The screenshot shows the website of Vitebsk State Technological University (ВГТУ). The header includes the university's logo and name. A navigation bar contains links: Главная / Студенту / Выпускнику / Центр развития карьеры / Резюме. Below this, there are three buttons: Соискатели, Резюме (highlighted in orange), and Запрос работодателя. The main form area contains the following fields and controls:

- Отдел**: A dropdown menu with "Департамент информатизации" selected.
- Должность \***: A text input field.
- Имя \***: A text input field.
- Фамилия \***: A text input field.
- Адрес E-mail \***: A text input field.
- Телефон (дом, работа, мобильный)**: A text input field.
- Резюме**: A large text area for writing the resume.
- Файл**: A file selection control showing "Выберите файл" and "Файл не выбран".
- Дополнительно**: A text area for additional information.
- Список вакансий**: A link to view the list of vacancies.
- Buttons**: "Отправить" (Send) and "Очистить поля" (Clear fields).

Figure 2.6 – Form of summary execution.

If an employer has not found a required employee in the existing list, he may send a request specifying the requirements for the employee, his duties, estimated salary and other data (Figure 2.7).

[Соискатели](#)[Резюме](#)[Запрос работодателя](#)

## Контактная информация

Компания \* Имя \* Фамилия \* Адрес E-mail \* Адрес сайта Телефон Дополнительно 

## Информация о вакансии

Отдел Должность \* Пол Возраст от Возраст до Зарплата Опыт работы График работы Обязанности Требования 

Список соискателей

Figure 2.7 – Employer Request Form

## Additional functions of Career Center:

- providing the graduate with the list of enterprises with which the University has concluded an agreement on cooperation (Figure 2.8). On 01.01.2016, the list includes 67 enterprises and organizations (<http://vstu.by/ru/studentu/vypuskniku/list>).
- a student can apply with a question relating to employment or work experience, to a representative of the university administration, whose competence includes consideration of the question (Figure 2.9) (<http://vstu.by/ru/studentu/vypuskniku/question>).



<div> <div>50</div> <div>  <div>Витебский государственный технологический университет</div> </div> </div>			
Студенту			
<div> <a href="#">Главная</a> / <a href="#">Студенту</a> / <a href="#">Выпускнику</a> / <a href="#">Перечень базовых предприятий</a> </div>			
<div> <div>Центр развития карьеры</div> <div>Перечень базовых предприятий</div> <div>Спрашивайте - отвечаем</div> </div>			
	Концерн	Краткое название организации	Полное название организации
1	Беллепром	8 Марта, Гомель	Открытое акционерное общество «8 Марта»
2	Беллепром	Акцент, Гродно	Гродненская перчаточная фирма «Акцент» ОАО
3	Беллепром	Алеся, Минск	Открытое акционерное общество «Алеся»
4	Беллепром	Белкельме, Белоозерск	ЗАО СП «Белькельме»
5	Беллепром	БелКредо, Новогрудок	Открытое акционерное общество «БелКредо»
6	Беллепром	БЕЛФА, Жлобин	Открытое акционерное общество «БЕЛФА»
7	Беллепром	Бобруйсктрикотаж	Открытое акционерное общество «Бобруйсктрикотаж»
8	Беллепром	БЧК, Брест	ОАО «Брестский чулочный комбинат»
9	Беллепром	Витебские ковры	Открытое акционерное общество «Витебские ковры»
10	Беллепром	Галантэя, Минск	Открытое акционерное общество «Галантэя»
11	Беллепром	Гронитекс, Гродно	Открытое акционерное общество «Гронитекс»
12	Беллепром	ЗИ, Витебск	Открытое акционерное общество «Знамя индустриализации»
13	Беллепром	Коминтерн, г. Гомель	Открытое акционерное общество «Коминтерн»
14	Беллепром	Красный Октябрь, Витебск	Открытое акционерное общество «Красный Октябрь»
15	Беллепром	Купалинка, Солигорск	Открытое акционерное общество «Купалинка»

Figure 2.8 – The list of the companies, which have signed an interaction agreement.



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Витебский государственный

технологический университет

Студенту

Главная / Студенту / Выпускнику / Спрашивайте - отвечаем

Центр развития карьеры

Перечень базовых предприятий

Спрашивайте - отвечаем

05.01.16 | Дарья

Распределение

Здравствуйте. Возможно ли распределение не по специальности, если я учусь на бюджетной основе (специальность-товаровед-эксперт, приглашают в бюджетную организацию экономистом)

Цитировать выделенное

Цитировать

Ответить

06.01.16 | Администрация (admin)

Ответ: Распределение

Дарья:

Здравствуйте. Возможно ли распределение не по специальности, если я учусь на бюджетной основе (специальность-товаровед-эксперт, приглашают в бюджетную организацию экономистом)

Здравствуйте. Не возможно.

Цитировать выделенное

Цитировать

Ответить

05.11.15 | Лукашук Мария

Преддипломная практика

Здравствуйте! Где я могу ознакомиться с правами и обязанностями сторон во время преддипломной практики, т.е. предприятия и студента? Спасибо!

Цитировать выделенное

Цитировать

Ответить

10.11.15 | Администрация (admin)

Ответ: Преддипломная практика

Лукашук Мария:

Здравствуйте! Где я могу ознакомиться с правами и обязанностями сторон во время преддипломной практики, т.е. предприятия и студента? Спасибо!

По всем вопросам преддипломной практики обращайтесь к Гущенко Александру Ивановичу, его кабинет 239, расположен в главном корпусе на втором этаже и еще возможно Вы найдете ответ на свой вопрос на страницах сайта учебного отдела - <http://uo.vstu.by/organizaciya-praktiki/>

Цитировать выделенное

Цитировать

Ответить

Оставить сообщение

Войти через:

Имя\*:







Заголовок\*:










В













I

U

ABC

Размер

Цвет

Предварительный просмотр

Оставить сообщение

\* Обязательные поля

Figure 2.9 – Students’ applications on the issues of their interest.

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### 2.1.6 Job fairs

October 14, 2015 Vitebsk State Technological University organized a meeting. Textile specialists from different enterprises met graduates with degrees in “Technology of yarn, fabrics, knitted fabrics and nonwoven materials.” The purpose of this meeting was to improve the effectiveness of pre-degree practical training (internships) and address the assignment of young specialists.

The discussion included individual counseling with 25 university graduates and representatives of the following Belarusian companies and enterprises:

- “Bellegprom”;
- JSC “Vitebsk carpets”;
- JSC “Baranovich Cotton Production Amalgamation”;
- JSC “Vitebskoblln”;
- JSC “Polotsk-Steklovolokno”;
- JSC “Mogotex”;
- JSC “SvetlogorskKhmivolokno”;
- JSC “Lenta”;
- RCIUE “Linen Mill”;
- JSC “Svitanak”;

Students presented their CVs, also asked questions. Most popular among the students were the problems targeting assignment such as:

- existing jobs at an enterprise;
- wages;
- a room in a hostel, providing of accommodation for families of young professionals.

Considering the counseling there were determined the places of internship for most of the students, and possible first jobs too.



Figure 2.10 – Job fairs

## **2.2 Organizing workshops by VSTU for presentation of the results of the project stakeholders**

In accordance with the project plan held 6 workshops (one in each of the regions of Belarus), which were presented to project goals and objectives, as well as obtained in the course of its implementation.

### **2.2.1 Workshop in Vitebsk State Technological University**

November 27, 2014 Vitebsk State Technological University introduced a seminar “Problems of interaction between Belarus universities and the EU countries with textile enterprises.”

The seminar was attended by the representatives of five (total 12) project partners – Vitebsk State Technological University, Mogilev University of Foodstuff, Belarusian State Economic University, Kaunas University of Technology, “Bellegprom” as well as the following textile companies and organizations:

- JSC “Baranovich Cotton Production Amalgamation”
- JSC “Belfa”
- JSC “Mogotex”
- JSC “Vitebsk plant of silk fabrics”
- JSC “Vitebsk carpets”
- JSC “Polotsksteklovolokno”
- “Center of Light Industry”. “

The total number of participants – 39 people.

The seminar program included the following presentations:

“The role of UNITE project in improvement of interaction system between Belarusian universities and textile enterprises” (D. Ryklin, VSTU);

“Needs analysis of the enterprises producing chemical fibers in the professional development of employees” (L. Scherbina, MSUF);

“Interaction between educational institutions and enterprises in the real sector of the economy as a form of strategic partnership” (Petrychenko E., Belarusian State Economic University);

“Training of specialists in the field of textile technology and their employment characteristics in Lithuania” (A. Ragaishene KTU).

The participants were briefed on the results of surveys on the issues of interaction conducted among teachers and students of the three universities of Belarus, as well as young and experienced professionals of the textile enterprises and enterprises for the production of chemical fibers and yarns. The experience and problems of interaction between the universities of the Republic of Belarus and Lithuania to the companies in the sector. Considerable attention at the seminar was given to the aims and objectives of the UNITE project.

Then followed a discussion on the interaction of higher education institutions and enterprises.

The most popular questions were the following:

- Questionnaire survey of the representatives of the textile enterprises for collaboration between universities and industry;
- Peculiarities of specialists training in the EU.



Figure 3.1 – D.B. Ryklin reporting (VGTU)





Figure 3.2 – E.V. Petrychenko reporting (BSEU)



Figure 3.3 – Audrone Ragaishene reporting (KTU)



Figure 3.4 – Representatives of the universities participating in the execution of the project UNITE, after the seminar in Vitebsk State Technological University

### **2.2.2 Workshop in Grodno House of Science and Technology**

May 14, 2015 at the Grodno House of Science and Technology held a workshop on “Current problems of interaction between educational institutions and textile and light industry enterprises “.

The seminar was attended by the representatives of the following organizations:

- Vitebsk State Technological University,
- Mogilev State University of Foodstuffs,
- Belarusian State Economic University,
- JSC “Gronitex”
- Grodno State University of Yanka Kupala,
- Grodno State Engineering, Technology and Design College
- Grodno State Vocational and Technical College of consumer services,
- GP Secondary School of settlement “Mir” Korelichi district,
- RUE “Scientific and Practical Center of National Academy of Foodstuff “
- Grodno branch of the Republican Scientific and Technical Library.

The total number of participants – 24 people.

The seminar program included the following presentations:

- «Good practice and problems of cooperation of educational institutions with Belarusian textile enterprises» (Ryklin DB, Vitebsk State Technological University)
- «The experience of Belarusian State Economic University on cooperation with business entities» (Primshits VV, Belarusian State Economic University)
- «Needs analysis of enterprises for chemical fibers production in the advanced training of employees» (Chvirov PV MGUP)
- «Prospects for further development of advanced training system for specialists of light industry enterprises» (Semenchukova IY, Vilnius Gediminas Technical University).

The director of Science and Technology Premises V. Barsukov greeted the participants and stressed the importance of the issues under consideration.

The discussion on the interaction between higher education institutions and enterprises followed. The participants visited JSC “Gronitex”.

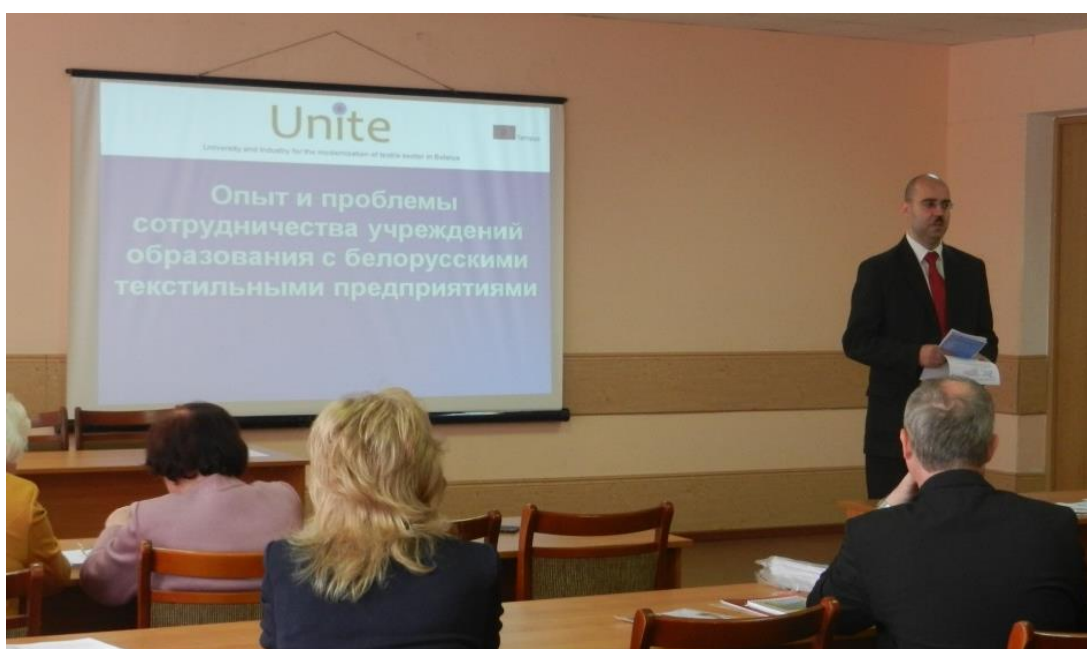


Figure 3.5 – Welcome speech from the Director of the Grodno House of Science and Technology V. Barsukov





Figure 3.6 – D.B. Ryklin reporting(VSTU)



Figure 3.7 – V.A. Fajngold reporting(BSEU)



Figure 3.8 – VV Primshits reporting (BSEU)



Figure 3.9 – I.Y. Semenchukova reporting(VSTU)



Figure 3.10 – P.V. Chvirova reporting (VSTU)



Figure 3.11 – Answering questions of the representatives of textile enterprises attending the seminar

### **3. ACTIVITY OF MGU SUBDIVISIONS RELATED TO PROBLEMS OF INTERACTION**

#### **3.1. The activity of subdivisions of Mogilev State University of Foodstuff**

##### **3.1.1. Changes into Job Descriptions of those, whose functions include interaction among enterprises**

As part of the project 544390-TEMPUS-1-2013-1-GR-TEMPUS- JPHES Educational Institution “Mogilev State University of Foodstuff” (EE “MSUF”) has carried out activities to improve the university system of interaction with industry.

Activities to improve the system of interaction between the university and industry:

Since the survey did not reveal the necessity to create a Liaison Office in the university, we analyzed all the functions of the structural units of the university. The following activities/measures to deepen cooperation between the university and industry were proposed:

##### ***1. Creating a Liaison Unit as part of the University Council for Cooperation of University and companies of “Bellegprom”.***

To develop its responsibilities we prepared the “The Case/Regulation of the Liaison Unit as part of University Council.” It includes the following sections:

1. General provisions.
2. The main objectives and tasks.
3. Scope of duties upon interaction.
4. Organization of the work.
5. Mutual relations.

We developed a structure of the Liaison Unit as part of the University Council.

The “Case/Regulation of the Liaison Unit,” contains:

- status of the Liaison Unit;
- Liaison Unit structure;
- main goals and objectives of the Liaison Unit;
- main directions of University and companies interaction within the competence of the Liaison Unit;
- Liaison Unit work arrangement, functions of its chairman, secretary and members;

- entities, with which the Unit interacts achieving its goals and objectives.
- During the reporting period the Liaison Unit held three meetings.

## ***2. Changes in the Regulations on the branches of the Department of Chemical Technology of High-Molecular Compounds (CTHMC) of MSUF at JSC Mogilevkhimvolokno and JSC Mogotex.***

In order to implement practice-oriented training, strengthen links with industry, the Department of Chemical Technology of High-Molecular Compounds (CTHMC) of Mogilev State University of Foodstuff has at its disposal two branches. They are actively used for the educational purposes at the following enterprises: JSC “Mogilevkhimvolokno” (subordinated to the concern “Belneftekhim”) and JSC” Mogotex “(subordinate to “Bellegprom”). In order to strengthen the interaction between the university and the company, the branches (JSC “Mogilevkhimvolokno” and “Mogotex”), include the following tasks:

- Effective usage of course and degree projects completed by the students of correspondence courses (employees) for problems solution in production;
- Selection of full-time students to prepare them for further work in the enterprise.
- Joint development of scientific-methodical, educational and information support of the educational process;
- Conducting of scientific and technical counselling for industrial specialists by the staff of the department of CTHMC;
- Long-term forecasting of the development of science and technology on the profile of the department of CTHMC, defining of perspective research areas related to research and development, production and sales of new products;
- Conducting of scientific and technical counselling for the specialists of the enterprise, which has a branch in it.

## ***3. We developed a job description for Deputy Head of the Department of Technology of Chemical Fibers, which includes:***

1. General Provisions.
2. Duties.
3. Rights.
4. Mutual relationship (job communication).
5. Evaluation of work and responsibility.

This document specifies:

- Requirements for applicants applying for this position;



- Documents that specify the duties of the Deputy Head of Department, specialization “Technology of chemical fibers”;
- Duties of Deputy Head related to the educational process, the interaction of the department with industry as part of training for those graduates specializing in production and processing of chemical fibers;
- Rights of the Deputy Head of the department related to the performance of his official duties;
- Entities with which the Deputy Head of the department cooperates when he performs his official duties;
- The procedure for assessment of the work and responsibility of the Deputy Head of the department.

***4. We developed a job description for the “Specialist responsible for the branch of the department”***

To arrange current work we developed a new position of the branch –a specialist responsible for the branch, appointed by the order of the head of the department CTHMC one of the teaching staff. “Job Description of the person Responsible for the branch of the department” includes the following sections:

- General Provisions.
- 2 Duties.
- Rights.
- Mutual relationship (job communication).
- Evaluation of work and responsibility.

It has been established that the person responsible for the branch reports directly to the head of the department CTHMC. The job descriptions include:

- Requirements for those applying for this position;
- Documents the responsible for the branch relies on while acting;
- Duties specified for the person in charge of the branch related to the educational process, interaction of the department with industry as part of the training for those graduates, specializing in production and processing of chemical fibers;
- Rights of the specialist responsible for the branch related to the performance of his official duties;
- Entities, with which the responsible for the branch shall cooperate performing his official duties;
- The procedure for work assessment and responsibility of the person in charge of the branch

- The procedure for assessment of the work and responsibility, which is responsible for the branch.

### ***5. Changes into Job Descriptions for the Head of Department***

The Department of CTHMC prepares chemical engineers for chemical and textile industry of the Republic of Belarus. Since the quality of training depends largely on the degree of interaction between the university and companies of the sector, to improve this system we expanded the functions of the Head of Department. The updated document stipulates that the Head of the Department:

1) designs a development strategy of the department, the purpose of which is interaction with the companies in the sector, as well as the strengthening relations with companies-employers.

2) arranges market analysis of educational services and labor market specialists, prepared by the department.

3) manages the activities of the Department for interaction with companies of the sector in the following areas:

- training of specialists qualified enough to meet the needs of enterprises;
- development of facilities and resources and socio-cultural base of the department;
- improvement of educational process and quality of training to meet the requirements of innovative development of the country's economy;
- ensuring a high level of practical training of students;
- picking orders for training and employment of graduates;
- organization of retraining and advanced training of employees of enterprises producing and processing fibrous materials (within the competence of the Head of the Department);
- training of teaching staff of the department at the branch enterprises;
- joint research activities;
- launching of branches of the department at the enterprises;
- vocational guidance work in the factories.

4) supervises the staff of the Department regarding the interaction between the University and the industry.

5) organizes adding of students and graduates of the department to a data base

6) informs students about the specialists in demand in the labor market.

## ***6. Changes into Job Descriptions for HR Manager***

Since HR department has a specialist who helps the graduates with the employment, his duties were extended regarding interaction with enterprises.

The job description of HR specialist:

6.1.1 Collects, organizes and analyses all the information on the labor market and graduates assignment, creates a database, comprises data on employers' applications for graduates.

6.1.2 Makes predictions about specialists in demand and analyzes the needs of businesses and organizations for expertise, quality and level of preparation of the graduates on the basis of employers' requirements as well as optimizes the employment of university graduates and to makes recommendations on new specialties and adjustment of curricula for existing specialties.

6.1.3 Develops activities to keep students informed about the specialties in demand and targeting their training in accordance with the specialization of potential employers.

6.1.4 Helps graduate departments with organization of presentations for the companies, as well as participation in business presentations. Organizes the interviews of graduates with employers as part of interaction of the University and companies.

6.1.5 Invites the heads of enterprises and companies to the meetings of graduate departments, conferences, seminars, job fairs, diploma defence.

6.1.6 Creates e-forms of professional, psychological and social portrait of the graduate for the most complete satisfaction of the application of the employer.

6.1.7 Constantly interacts with companies and enterprises, Employment Center, recruiting agencies and city youth organizations.

6.1.8 Twice a year (September, and January) makes a request to the Employment Center of the city on the demand of labor in the city labor market and unemployed university graduates.

6.1.9 At least once a year reports at the meeting of the Section on the interaction of the University and enterprises of "Bellegprom" to the University Council on the results of the work on graduates employment, as well as other current and future issues of interaction between the university and businesses on training.

## ***7. Customer Satisfaction Survey development***

In order to ensure the sustainability of project results we have developed questionnaires/forms to assess the satisfaction of our consumers (graduates and businesses-employers) towards educational services provided by the University:



- “Evaluation of employer’s satisfaction with the quality of training of graduates trained by the Educational Institution” Mogilev State University of Foodstuffs” (attached);
- “Students’ satisfaction with the quality of training services in MSUF” (attached).

### **3.1.2 Considering a schedule of internships with industry**

According to the survey among students and teachers of MSUF, the main issue of university’s interaction with companies is internships and diploma projects.

48.9% of students are completely satisfied with supervising services of the university during their internships. The main reason for dissatisfaction they called the content of guidelines for internship, which was often incomprehensible for enterprise specialists. In addition, the students claim that the supervisor’s counseling, as well as requirements for the report were not enough specified.

Even fewer students (38.6%) were satisfied with the supervision performed by the enterprise.

Another major problem within the internship is the availability of information. Thus, 19.6% of students noted a denial after their information request as a major problem of internship. The survey positively revealed that none of the respondents considered the necessity of complete refusal to provide information. However, the majority of the respondents (60%) believe that the requested information should be agreed in advance with the University and enterprise management. At the same time the majority of the respondents (70%) spoke about limited access to economic information while carrying out course and diploma projects, 20% - of the possibility of full access and 10% - of the impossibility of providing such information. Note that for the time being there is no such approval procedure.

Therefore, after counselling with the senior staff of several enterprises we revised the operations manual of internships. The organization and the content of the internships were explained and some requirements were specified. The following is a summary of the internship program.

1. General Provisions
2. Objectives and content of internship
- 3 Responsibilities of the senior of the students group
  - 11 Duties of the student-trainee
  - 11 Duties of the internship supervisor on part of the **CTHMC** department
  - 11 Duties of the internship supervisor on part of the enterprise

- 7 Financial support
- 8 Duration and internship schedule
- 9 Internship program
  - 9.1 General familiarity with the production
  - 9.2 Raw materials, basic and auxiliary materials, finished goods, warehousing
  - 9.3 Technological scheme and its hardware design
  - 9.4 Auxiliary Unit
  - 9.5 Operation and diagnostics of equipment
  - 9.6 Control of production
  - 9.7 In-plant transportation
  - 9.8 Automating the process
  - 9.9 Resource and power supply of manufacture
  - 9.10 Work Safety
  - 9.11 Environmental protection
  - 9.12 Production Economics
  - 9.13 Individual task
  - 9.14 Internship Diary/Journal
- 10 Internship Report
- 11 Summing up internship
- Recommended manuals
- Appendix A Sample table design
- Appendix B Sample of technological scheme
- Appendix C Sample of schematic cut equipment

In addition, the University agreed on a specific procedure for the provision of information not subject to disclosure, the students who undergo internship.

### **3.1.3 Curricula adjustment**

The survey of young professionals – graduates of MSUF and specialists in the production and processing of fibrous materials found that the opinions about the question whether the knowledge received at the university corresponded to the latest technology divided almost equally: half of the respondents answered “fully “, and half – “partially”.

Almost one-third of graduates (36.0%) believe that the content of some special disciplines at the university basically corresponds to the current state of manufacture, but partially contain outdated material.

85.0% of the surveyed teachers think that to improve the level of satisfaction with the graduates the participation of enterprises in the improvement of the educational process should be strengthened.

30% of students believe that the content of special disciplines at the university corresponds to the current state of manufacture and 5% that lecture material contains information outstripping the industry level. Nearly two-thirds of students (59%), with industrial experience, believe that the lecture material comprises partially outdated information. This fact demonstrates the need for completion of courses to bring them into line with actual industry levels.

The result of the joint work of teachers in the Department of Chemical Technology of High-molecular Compounds MSUF and specialists of JSC “Mogotex” were adjustments and changes into the curriculum for the specialty “Chemical technology of organic substances, materials and products,” specialization “Technology of chemical fibers”. We increased the lecture hours for the discipline “ Basics of finishing production technology “(the number of lecture hours has been increased from 22 to 34, the number of hours for laboratory classes, increased from 8 to 17). We developed a program for the discipline “Fundamentals of production finishing technologies» The table 4.1 presents the issues covered in the course by increasing the number of hours.

Table 4.1 – Questions included in the course “Fundamentals of production finishing technology”

Topic	Supplementary questions
Hardware design of dyeing process	Major foreign companies – manufacturers of the equipment for dyeing textiles. The equipment for periodic and continuous operation. Comparative characteristics of technical and economic indicators of the equipment for dyeing textiles.
Hardware design of textile printing process	Major foreign companies – producers of equipment for the printing of textile materials. Equipment periodic and continuous action. Comparative characteristics of technical and economic parameters of equipment for the printing of textile materials.
Giving textile materials hydro- and oil-repellent, dirt-repellent properties	Hydro and oil-repellent mechanism. Treating fabrics with aluminum soaps, silicone compounds to give them water repellency, making chemical changes in the fiber. Antipollution finishing of textile materials

The curriculum of the discipline was considered and approved at the meeting of the Department of Chemical Technology of High-molecular Compounds, September 30, 2015.

On the basis of counseling with the leading specialists of enterprises we added a new discipline “Methods of study and modification of organic substances, materials and products,” into the curricula of the specialty “Chemical technology of organic substances, materials and products,” specialization “Technology of chemical fibers”. Students need to study modern physical and chemical methods of analysis of polymer materials and the basic methods of modifying their properties. In manufacture there is a wide range of investigation methods of polymers and materials based on them is widespread.

The curriculum of the discipline was considered and approved at the meeting of the Department of Chemical Technology of High-molecular Compounds, September 30, 2015.

We supplemented the list of sources for the discipline “Fundamentals of Materials Science and textile technology.” Additional list includes the following sources:

1. Catalogue of the company «Oerlicon», <http://www.oerlicon.com>.
2. Catalogue of the company Swisstex Machinery Inc. <http://www.swisstex-machinery.com>
3. Catalogue of the company «Sultex», <http://www.sultex.com>.
4. Catalogue of the company «Benninger», <http://www.benningergroup.com/>
5. Catalogue of the company «Picanol», <http://www.picanolgroup.com/en>
6. Catalogue of the company «Dornier», <http://www.lindauerdornier.com>.
7. Catalogue of the company «Sulzer Textil», <http://www.sulzer.com>.
8. Catalogue of the company «Karl Mayer», <http://www.karlmayer.de>
9. Catalogue of the company «Tsudakoma», <http://www.tsudakoma.co.jp>
10. Catalogue of the company «Pomatech», <http://www.promatech.it>.
11. Catalogue of the company «Truetzschler», <http://www.truetzschler.com/en/>
12. Catalogue of the company «Trinca», <http://www.trinca.it>
13. Catalogue of the company «TMT Machinery», <http://www.tmt-mc.jp/>
14. Catalogue of the company «Savio Macchine Tessili», [www.saviotechnologies.com](http://www.saviotechnologies.com)

### **3.1.4 University and Industry Interaction in Diploma Projects**

The position of industrial experts' is that university subjects for R&D is divorced from reality and production needs. In this regard not without interest are the teachers' answers about a book of problems that should be developed with industrial support, an analog which was developed in the Ministry of Industry of the Republic of Belarus.

The vast majority of teachers (95%) voted for such list of tasks in which industrial companies are interested themselves. At the same time 85% of the respondents made it clear that the existence of such book of problems does not mean that it is a must to use it developing a diploma project.

In order to update the topics for course and diploma projects (works) we sent requests to the enterprise producing and processing fibrous materials in Belarus. We wanted to make the topics of future projects as close to the real needs of the industry as possible. The received information will be included in the list of course and degree projects in 2016/2017 school year.

In addition, the topics of the diploma projects (works) are approved by the chief engineer of JSC "Mogilevkhimvolokno".

In order to increase the objectivity of evaluation of diploma projects (works) in the 2014/2015 school year to protect them by the students specializing in "Technology of chemical fibers" we invited the industrial representatives of (JSC "Mogilevkhimvolokno", JSC "SvetlogorskHimvolokno", JSC Grodno Azot ", JSC "Mogotex"). We are planning to repeat such practice in the future.

### **3.1.5 Doors Open Day at University**

In order to familiarize potential applicants with the University March 15, 2014, January 16, 2015 December 11, 2015 March 19, 2016, it held open days.

Graduates and their parents from all Belarusian regions got acquainted with the professions and specializations of the University and its training programs, including chemical and textile industry, especially the application and admission procedure, got expert answers to all of the questions of registration, organization and conduct of centralized testing, preparatory courses for specialized internal exams at university, hostels and assignment of graduates of different specialties.

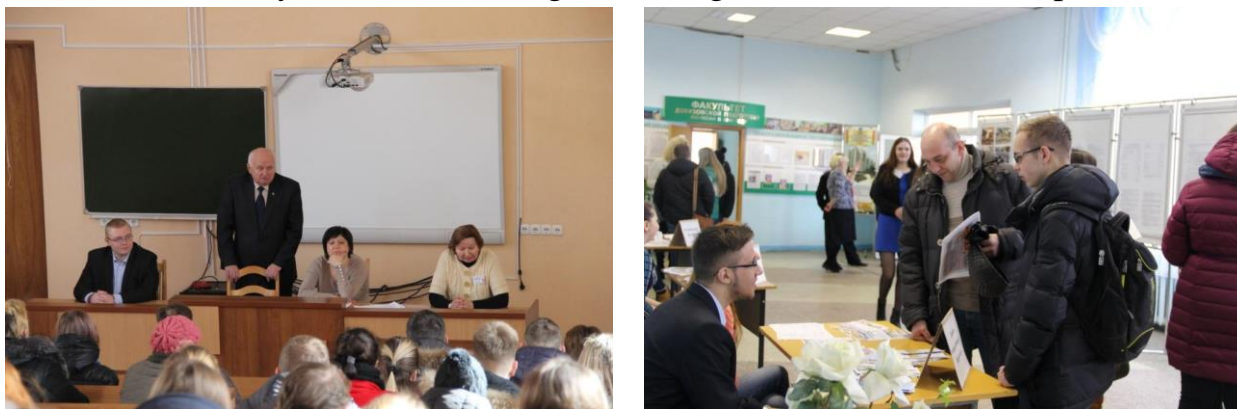


Figure 4.1 – Doors Open Day at University

## **3.2 Organizing workshops to provide delivery to beneficiaries**

According to the project plan we held 6 workshops (each for a region of the Republic). The main tasks and objectives were read out as well as deliveries obtained.

### **3.2.1 Workshop “Dissemination of TEMPUS project in Mogilev**

On the 29th of May, 2015 the workshop-conference "Cooperation between university and industry: key to success" was held in Mogilev State Foodstuffs University (MSUF) within the project TEMPUS /UNITE 544390-TEMPUS-1-2013-1-GR-TEMPUS-JPHES «University and Industry for the modernization of textile manufacturing sector in Belarus». 66 representatives of the organizations and institutions of the Ministry of Education of the Republic of Belarus (MGU, Belarusian State Economic University (BSEU), Vitebsk State Technological University (VSTU)), Belarusian State Concern for Oil and Chemistry "Belneftekhim", (JSC "Mogilevkhimvolokno", OJSC "Svetlogorskikhimvolokno",

JSC "Naftan", etc.), Belarusian State Concern for production and sale of goods of light industry "Bellegprom" (JSC "Mogotex", "Lenta" and others.) as well as their subsidiaries attended the conference.

Viachaslau Sharshunou, rector of MSUF, corresponding member of the National Academy of Sciences, Professor, Honored Scientist of the Republic of Belarus opened the meeting. The reports on the issues of training specialists and cooperation between universities and enterprises of chemical and textile industries of the Republic of Belarus were made by:

- Alexandr Nosikau, First Vice-Rector of MGU;

- Leonid Scherbina, Head of the Department of Chemical Technology of High-Molecular Compounds of MSUF ("On the work of the Department of Chemical Technology of High-Molecular Compounds and on the role of its affiliates in the practice-oriented training of specialists for chemical and light industries");

- Irina Budkute, Associate Professor of the Department of Chemical Technology of High-Molecular Compounds of MSUF ("On the cooperation between Mogilev State Foodstuffs University and industrial (sector) enterprises in training of chemical production engineers");

Natalia Yasinskaya, Associate Professor of VSTU ("Guidelines in cooperation between Vitebsk State Technological University and textile industry enterprises");

- Valery Feingold, Deputy Head of Coordination center for educational process of BSEU ("On the cooperation between the Belarusian State Economic University and industrial (sector) enterprises in practice-oriented training of specialists");

- Victoria Primshits, Dean of the Faculty of Raising Qualification of BSEU ("On the organization of activities for raising qualification of cadres").

Representatives of the industrial enterprises also addressed the meeting:

- Pyotr Salaujou, Chief Engineer of JSC "Mogilevkhimvolokno";

- Andrey Kovalenya, Head of law and personal department of "Bellegprom";

- Mikhail Svirepa, Deputy General Director of JSC "Mogotex" for ideological work and personnel;

- Natallja Drozd, Deputy General Director of JSC "Lenta";

- Volga Kruglikova, Deputy Chief Technologist of OJSC "Svetlogorskikhimvolokno"; Vadim Tereshkou, head of the central laboratory;

- Mikalay Ushkevich, Deputy Director for Production of "Polymir" Plant of JSC "Naftan", Konstantin Ustinou, deputy head of the technical department.

All the speakers informed the conference about the main forms of cooperation between industrial (sector) enterprises and universities in terms of training specialists for industry. Moreover, they focused on the problems of training students at educational institutions. Almost all the speakers agreed that the main causes of knowledge-paradigm crisis are: firstly, knowledge-focused orientation of university studies, and secondly, contradiction between the way of vocational education and present-day industry (business). Thus, young professionals who start working at the enterprises often cannot apply their knowledge in practice, evaluate, analyze incoming information and compile it, make decisions in industrial and economic activities, etc. In recent years, particularly in Belarus there has been a problem related to the fact that enterprises have more specialists with higher fundamental education than they need, while the real economy began to experience a shortage of qualified practice-oriented cadres. Therefore, new forms of organization of retraining and advancing qualification of specialists for enterprises are of great interest to solve cadre issues in the industry.



Figure 4.2 – General Committee





Figure 4.3 – Associate Professor of VSTU N.Jasinskaya



Figure 4.4 – Associate Professor of CTHMC of MSUF I. Budkute



Figure 4.5 – Vice Head of Coordination Centre of Educational Process of BSEU V. Fainhold

In conclusion, Leonid Scherbina, head of the Department of Chemical Technology of High-Molecular Compounds of MGU, said that the project 544390-TEMPUS-1-2013-1-GR-TEMPUS-JPHES «Universities and industry for the modernization of the textile industry in the Republic of Belarus" related to higher education reformation in accordance with labor market needs is relevant, timely and urgent for higher education system and industrial enterprises in up-to-date situation.

### **3.2.2 "Cooperation between enterprises and educational institutions – the key to successful economic development» (workshop in Svetlogorsk)**

On February 19, 2016 the Workshop "Cooperation between enterprises and educational institutions - the key to successful economic development» in the framework of the Tempus project / UNITE 544390-TEMPUS-1-2013-1-GR-TEMPUS-JPHES was held on the basis of OJSC "Svetlogorskhimvolokno". The organizers of the Workshop were OJSC "Svetlogorskhimvolokno" and institution of education "Mogilev State Foodstuff University" represented by the Department of Chemical Technology of High-molecular Compounds.

The aim of the Workshop was to analyze the problems of the development and strengthening cooperation between educational institutions and enterprises in the areas of training, advanced training and retraining of personnel, implementation of joint research and other aspects of cooperation.

Representatives of organizations and institutions of the Ministry of Education of the Republic of Belarus, Belarusian State Concern for Oil and Chemistry "Belneftekhim" and State Concern for Production and sales of goods of light industry "Bellegprom" as well as their subordinate enterprises (producing and processing yarns and fibers as well as materials on their basis), JSC "Svetlogorsky Pulp and Paper Integrated Works" (producing raw cellulose), educational institution "Svetlogorsk State Industrial College", unitary enterprise "Svetloteks", department of education of Svetlogorsk district executive committee and other organizations were invited to participate in the Workshop. 49 people took part in the Workshop.

In accordance with the program General Director of OJSC «Svetlogorskhimvolokno» V. Kostyukevich opened the Workshop. Chief engineer of OJSC "Svetlogorskhimvolokno" V.Vovk and head of the Department of Chemical Technology of High-molecular Compounds of institution of education

"Mogilev State Foodstuff University» L. Scherbina presided over the morning session of the Workshop/

Plenary speakers were:

- Chief Engineer of OJSC "Svetlogorsk Khimvolokno" V. Vovk with the report on "Actual problems of cooperation between the industry and educational institutions";
- Head of the Department of Technology of Textile Materials of Vitebsk State Technological University, Professor, Doctor of Technical Sciences, D. Ryklin with the report on "The role of UNITE international project in improving system of cooperation between Belarusian universities and textile enterprises";
- Head of the Department of Chemical Technology of High-molecular Compounds of the institution of education "Mogilev State Foodstuff University» L. Scherbina, Ph.D., Associate Professor with the report on "Implementation of practice-oriented training of specialists for chemical and light industry at the Department of Chemical Technology of Macromolecular Compounds of MSFU";
- Associate Professor of the Department of Chemical Technology of Macromolecular Compounds of institution of education "Mogilev State Foodstuff University», Ph. D, I. Budkute with the report on "Analysis of the results of questioning of university graduates and specialists on the issues of cooperation between MSFU and enterprises of the Republic of Belarus in training specialists";
- Associate professor of the Department of Physics and Chemistry of Materials and Production Technologies of the Belarusian State Economic University, Ph. D, N. Kahno with the report on "Fields of cooperation between BSEU and enterprises of real sector of the economy in the area of professional development ."



Figure 4.6 – Director General JSC «Svetlogorsk Khimvolokno» V. Kostjukovich



Figure 4.7 – Head of the Department of Technology of Textiles, PhD., D. Ryklin



Figure 4.8 – Head of the Department of Chemical Technology of High-Molecular Compounds of MSUF, L. Scherbina



Figure 4.9 – Associate Professor of Chemical Technology of High-Molecular Compounds of MSUF, I. Budkute

The reports were also made by the representatives of the companies and organizations involved in the issues of the development and strengthening of cooperation between educational institutions and enterprises.

Up-to-date and forward looking problems as well as fields of training and retraining of specialists and the problems of the development of scientific research for chemical and textile industry enterprises in Belarus (for the production and processing of fiber and textile materials ) were discussed at the Workshop.

During the discussion emphasis was made at the high competitiveness of the graduates of MSFU, VSTU and BSEU on the labor market, which is achieved due to the organization of practice-oriented training of specialists with industry participation and by involving specialists of industrial enterprises in the educational process.

The participants of the Workshop draw attention of the Ministry of Education of the Republic of Belarus and Concerns "Belneftekhim", "Bellegprom" and "Bellesbumprom" ( Belarusian Industrial and Commercial Concern of timber, woodworking and pulp and paper industry) to the feasibility of studying and dissimilating positive experience of designated practice-oriented training specialists for the industry in accordance with the needs of enterprises and prospects of their development at the university branches (located at core enterprises). New forms of organization of retraining and raising qualification of specialists of enterprises are of considerable interest to settle regular personnel issues of the industry.

Attention was also paid to the need to settle the problem of introducing amendments and changes in the National Classifier of the Republic of Belarus on Professions of Industrial Workers and Positions of Office Workers. in order to provide young professionals with the possibility to be employed at the working places until the moment the qualification tests have been passed to let them have the right of access to technologically sophisticated areas of production.

At the end of the Workshop there was an open discussion at the round table directed by chief production engineer of OJSC "Svetlogorskhimvolokno" V.N. Dokuchaev and chief engineer of the enterprise of polyester textile yarns of OJSC "Svetlogorskhimvolokno" S.M. Ushak.

The participants of the Workshop visited production sites of "Svetlogorskhimvolokno". Complex and diverse equipment and technologies demonstrated to them prove the necessity of introducing practice-oriented training of highly qualified specialists with a broad outlook and thorough professional knowledge.

As a result of the discussions on the topical issues of cooperation between universities and enterprises the following the recommendations were developed:

- Consider the possibility of organizing regular meetings of the representatives of enterprises and educational institutions to discuss topical problems of cooperation with a view to further improving the quality of training, carrying out research and development of technological processes;
- Continue strengthening and further development of the cooperation between universities and companies in the sector in scientific and technical, industrial and educational spheres not only at the national level but also at the international one;
- **TO MSFU, VSTU, BSEU:**
  - In collaboration with training personnel departments of enterprises continue further improvement of training and retraining system for the industry, through the development, application and creation of distance learning elements as well;
  - Involve specialists of enterprises in the educational process to a greater extent, including the working out the themes for course papers and diploma projects and works connected with the development of new technological processes and items manufactured as well as the improvement of the existing ones;
  - Continue further strengthening of practice-oriented training for the enterprises of concerns "Belneftekhim", "Bellegprom" and "Bellesbumprom";
  - Continue strengthening and development of cooperation with educational, scientific and industrial organizations of the European Union and other countries in the areas related to the improvement of the system and quality of education, the development of national industry and science, improvement of citizens wellbeing and environmental protection in the Republic of Belarus;
- **TO enterprises** of concerns "Belneftekhim", "Bellegprom" and "Bellesbumprom":
  - Prepare and submit the list of issues for urgent or further consideration (research, training, raising the qualification, retraining, etc.) to the educational institutions in order to coordinate scientific, technological and other kinds of work;
  - For attracting and securing places of work to young professionals at the enterprises continue the activities connected with career guidance of local young people to get education on specialties required by enterprises;
  - Collaborate with the employees having special secondary education in order to motivate them for further professional development and career growth through continuing education in higher educational institutions on the reduced apprenticeship;

- Consider the motivation of enterprises employees to develop the skills according to the programs of personnel training and retraining, including the elements of distance learning offered by MSFU, VSTU, BSEU;
- Provide further assistance to the educational institutions to gather information on the latest processes, technologies and equipment;
- Study the issue of the admission of university teachers and students having industrial training at the enterprise to the information and technical documentation on up-to-date production equipment and processes in order to improve the quality of training specialists for the enterprises under consideration;
- The following suggestions were made in connection with the increasing complexity of up-to-date equipment and technological processes of enterprises:
- Get ready the substantiation and study the issue how to apply under the support of the management of the involved Concerns to the Council of Ministers with an initiative of the possibility for young specialists to be employed at the working places (requiring high engineering and technological qualification) until the moment the qualification tests specified by the enterprise have been passed.
- Get ready the substantiation on the introduction of changes in the National Classifier of the Republic of Belarus on Professions of Industrial Workers and Positions of Office Workers. associated with the transfer of a number of professions of industrial workers to the position of the engineering profile.

## **4. ACTIVITY OF BSEU SUBDIVISIONS RELATED TO PROBLEMS OF INTERACTION**

### **4.1 The activity of subdivisions of Belarus State Economic University**

The project is aimed at strengthening the interaction between the higher education institutions and industry. To achieve the goal we had to revise the current University departments' activities, job responsibilities of those in charge of particular areas, regulations and instructions, defining the relationship with customers who need specialists.

Note that at the beginning of the project the University developed quite an effective system of cooperation. We managed successfully to solve the problems of training and internships to get qualified specialists.

However at that time we still had no single coordinating center, which would focus various areas of cooperation, and coordinate the actions of the University departments. Besides, we had no such document which would regulate and specify such kind of activities.

Such document (the Case of interaction between BSEU and enterprises and businesses of the real sector of the economy (hereinafter Case)) was prepared and put into effect during the project.

Taking into account the practice of relations between the university and industry (enterprises) the main directions for interactions were identified as follows:

- Monitoring the demand for personnel on the labor market and the identification of the most popular specialties for the time being and in the future;
- Development of requirements for the competence, knowledge, skills and experience of experts;
- Participation of leading specialists of industrial enterprises and businesses in the educational process, in the state exam commissions, joint development of the themes of projects and dissertations, master's theses;
- Organizing and conducting of students and masters' internships;
- Receiving orders for training and employment of graduates;
- Training and retraining of the enterprise staff;
- Joint research projects of applied nature;
- Organizing internship programs for University staff members to pass at enterprises;
- Occupational/Career guidance for the companies;



- Mutual informing about events;
- Customer satisfaction surveys and assessments (both employers and graduates);
- Creating and organizing branches of university's departments in enterprises;
- Increasing the number of base organizations concluding agreements about the interaction.

In order to fulfill the following objectives highlighted above on co-operation we should:

- Create the system of interaction between university and employers through university structural units;
- Prepare documents, defining the responsibilities of the departments and University officials on cooperation with partners, etc.

The case defines the goals and objectives of interaction, organization and decision-makers.

The basic structural unit to carry out cooperation with enterprises is the coordination center of the educational process (CCEP), its chief is – the coordinator of interaction.

The scheme of interaction is shown in Fig 4.1.

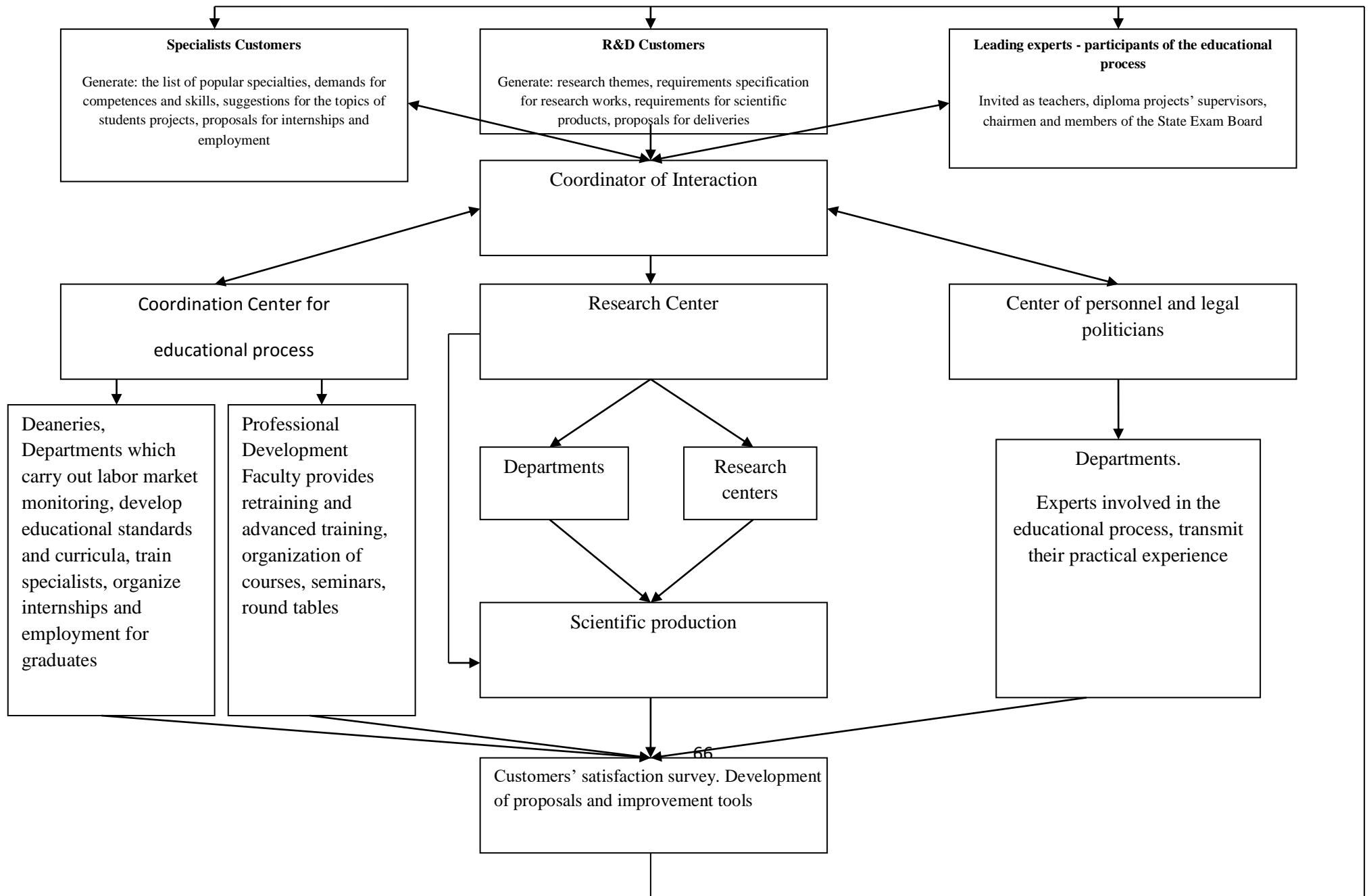
The variety of directions and forms of interaction between the university and industrial sector involves engagement of a large number of executives in the process. So, a vital task is to share activities, coordinate them and make the right decisions.

A significant area of cooperation is developing the contingent of students at the university and a list of specialties. On the basis of companies' long-term forecasting of the demand for specialists and its annual reconfirming (specialties, qualifications) faculties and departments prepare proposals on the admission quotas and submit them for approval to the Ministry of Education, make the necessary changes into agreements on cooperation in the National Classifier of the Republic of Belarus "Specialties and qualifications" to include new specialties and cancel the unclaimed ones.

Before opening of new specialties the departments conduct market research to find out the industry's demand for specialists, study labor markets and educational services, and companies declare their need for specialist training.

The departments conduct vocational guidance in enterprises to attract experts to get their first and second higher education, a master's degree in education.

Fig. 4.1. INTERACTION SCHEME



Internships are mainly organized by graduate department of Belarusian State Economic University. This work is coordinated by the University supervisor of internship, who is a part of the coordination center of the educational process (CCEP).

Graduate Departments:

Develop the programs of internships; provide managers of enterprises with them (organizations);

- Selects companies for internships;
- Appoint supervisors from the departments and develop individual tasks for students;
- Organize the meetings on the internships' issues, management, control;
- Discuss and analyze the results of the internships' programs in the departments' meetings;
- Submit reports with suggestions how to improve internships to the dean's office and to the internship supervisor in CCEP.

Internship supervisor:

- Agrees with the companies upon the place of students' practical training;
- Concludes contracts upon conducting of internships;
- Informs the departments of companies available for internship in accordance with existing concluded agreements;
- Together with the deans of faculties and departments improves the process of internship;
- Supervises the organization and carrying out of internship;
- Makes survey and summarizes the internship results;
- Monitors the terms for the development of internships programs;
- Analyzes the departments' reports on the internship results.

In addition, the internship supervisor generates and annually collects the data about enterprises. Students get practical training according to the passports prepared by graduate departments(schools).

Passport of the enterprise includes:

- Full name of the company;
- The parent organization;
- Number of employees;
- Main activities;
- Company structure (management, offices, service);
- Director (surname, first name, phone number);
- Legal address.

Such data base and the analysis of students' feedback allows students identify industries in which the internship is carried out with high efficiency and, on the contrary, reject those that do not allow to carry out an internship's program in full.

To interact with employers more closely annually before the internships we organize a job fair. We invite the representatives of the businesses of various patterns of ownership, those who take interest in university graduates. Common practice of this event showed a fairly high efficiency.

The fairs are attended by the deans of faculties, departments, CCEP. Information about the performance of fair can be found on the website of the University. We also inform all the enterprises and stakeholders. We conclude agreements on internships during the fair carry out a survey of the participants; establish contacts with the offices of organizations.

University progressively increases the number of base organizations concluding contracts on cooperation, opening branches of the departments to carry out joint activities of mutual interest.

The internship is closely related to graduates employment. The deans of faculties focus on the employment. They accumulate the companies' applications for young professionals; specify with the companies their working conditions. We invite the representatives of employers to the meeting of the commission on the assignment; we inform them preliminary about the time and the place of the meeting.

Student personnel department:

- Draws up assignment certificates for graduates;
- Notifies the company of the arrival of young professionals and monitors their arrival;
- Keeps a register of graduates' assignment and employment 2 more years;
- Organizes the reassignment.

On its website the University hosts a server system "Start-career". Its main goal is - to assist the dean's offices and departments in internships and employment of BSEU graduates.

Employers have the opportunity to review the list of specialties and specializations, with students' personal data and post information about available vacancies.

Students - users of the system, can post their CVs, assess the employers' requirements, and get information about temporary or permanent employment.

Maintenance and updating of the server is provided by the department of Internet Office of Information Technology Development Center (ITDC).

Academic Office of Quality Management department, which is part of the structure of the ITDC, annually evaluates customer satisfaction with the quality of training. They conduct surveys of companies' managers and workers', including university graduates of various years.

The questionnaires contain questions about the graduates' professionalism and competence, the relevance of the acquired knowledge and their compliance with the requirements of the industry, availability and completeness of the information about the university, the generalized evaluation of the quality of services rendered, ready for further cooperation.

The Department of Economic Sociology analyzes the profiles, involving students. According to the results they review the proposals received and develop recommendations.

R&D Centre of BSEU coordinates the interaction between the University and enterprises. Its main functions are:

- development of the R&D topics in accordance with the basic scientific areas of the university and enterprises' offers;
- organization of researches carried out by the state, sectoral and regional research programs, involving the representatives of the enterprises;
- organization of R&D under the contracts concluded with customers and financed by their own resources;
- ensuring cooperation of the University departments with institutions and organizations in the field of science and scientific services;
- establishment and coordination of temporary research teams to carry out research and development.

The performance of research work demands involvement of faculty departments, academics centers, graduate and doctoral students, undergraduates and students

The University has established contacts with ministries and authorities, leading enterprises organizing the educational process, developing educational standards, harmonizing model curricula and programs. The staff is taking into account their proposals on the content of academic disciplines, qualifications requirements for specialists and a number of other factors which contribute to improvement of quality of training.

When organizing the educational process, we should take into account the interaction between departments and enterprises.

The departments:

- Train specialists in accordance with educational standards; invite enterprises to participate in the development of material and technical resources of the university, develop the themes of diploma projects and dissertations, master's theses;
- make excursions and field training in the industry;
- supervise the students' final works and their reviews by the company's employees;
- organize joint seminars, round tables, conferences both university-based and enterprise-based;
- include enterprises' administration in the state examination boards;
- introduce the results of research and development into educational process;
- attract leading specialists of enterprises to give lectures, conduct workshops.

Companies are developing proposals for updating curricula and training programs, organize the exchange of information on matters of mutual interest.

Some companies award special scholarships for excellent and well-performing students.

In order to strengthen ties with industry the university proposes a wide range of specialties for advanced training and retraining of employees.

Retraining and advanced training institute carries out training and retraining of economic staff, which is a structural subdivision of the university. To attract trainees its staff carries out constant monitoring of the labor market, vocational career guidance, establishes relationships with organizations and agencies. Educational standards, curricula and training programs of specialties are agreed with stakeholders. The Institute has got proven training programs, but can promptly react to industry's proposals to train topics they want. Along with the faculty staff of the Belarusian State Economic University, we attract industry professionals to the training process.

On the other hand, in order to study the current state of manufacture the teaching staff is trained in a variety of companies, which use advanced technologies. The experience gained is actively used in preparation for training sessions.

Close contacts of the University with the business entities in various areas of activity allow to train professionals to meet modern standards and contribute to the improvement of the educational process.

To implement this Case we made several relevant amendments to the cases of structural subdivisions (faculty, department, CCEP, R&DCentre, ITDC) of the University, to jobs' descriptions of officials (Dean, Vice Dean, Head of

Department, Head of the CCEP, internship's supervisor, student employees of the personnel department, Head of quality management office).

Amendments and changes to the cases of the faculty and official instructions of the *dean and associate dean*, are aimed at:

- Co-operation of enterprises (organizations) and Faculty guidance on the organization of inter-departments workshops, scientific and methodological meetings, students internships, training professors to the faculty, research, and conferences;
- Interaction between University' and companies' supervisors of graduates' internships;
- Interaction between companies and the University for Graduates to obtain practical experience;
- Systematization of enterprise applications on the employment of young specialists and coordinate the interaction of the university graduates assignment;
- Coordinating the work of the departments for the career guidance;
- Monitoring requirements for specialists in the labor market;
- Participation in the preparation of the draft order for training and employment of graduates.
- Improving the forms of interaction among the departments in educational, methodical, and scientific work.

Changes to the Case of the Department are focused on:

- Interaction with the enterprises (companies) on internships organization, followed by the provision of the first workplace for young professionals;
- Industrial training of the teaching staff on the main job;
- Defining base enterprises, opening branches of university's departments;
- Monitoring the demand for professionals in the labor market, defining the most popular professions in the long term, defining the requirements of professional competence, knowledge, skills and professional skills;
- Participation of leading specialists in the educational process, theme development of students' projects and master's theses;
- Evaluation of customers' satisfaction with the quality of training.

Additions to the Case CCEP touched coordination of interaction of departments and enterprises (companies, institutions) as a whole and on the organization and control of all types of students internships in particular.

Job description of the Internship Supervisor was supplemented with:

- Coordination of the interaction of the University departments with the enterprises (companies, institutions) for students internships, processing

applications from university departments and enterprises on all types of internships, and timely conclusion of agreements;

- Coordination of interaction of internship supervisors of departments and enterprises (companies, institutions) on the quality of management and control of students internships.

The Case of *quality management department* includes the issues of interaction of the departments and enterprises (companies) of the real economy on customers' satisfaction.

The First Category *Methodologist of CCEP* additionally processes requests for training from enterprises, compiles information and informs the deans of relevant faculties of the requests received .

The Case of R&DCentre we supplied with obtaining state registration for the R & D funded by the republican and local budgets and economic entities of the real sector of the economy of Belarus, concluded on the basis of interaction between departments of the university with the enterprises - customers of these works .

The Case of the HR Department was supplied with the item:

- Coordination of the interaction between HR Department of enterprises and departments of the faculty to invite the leading specialists of the professional community to work at the University.

Changes to the regulation of *student personnel department* introduced cooperation with the enterprises (organizations) to inform them on assignment of young specialists and to control their arrival.

Supplement to the regulation of the "*Internet*" Office is aimed at maintaining interaction with business entities in the framework of the project "Start-career".

During the project the University has signed 24 agreements on cooperation with organizations, enterprises and institutions, opened 9 branches of departments, 2 research laboratories.

This allowed students and teachers to provide new services. We increased the number of positions for students' internships in different specialties.

So, the university saw opening the branch of the Department of Economic Informatics at JSC "EPAM Simtemz" and the conclusion of the agreement on cooperation. The students got an opportunity to learn the newest information technologies in accordance with the requirements of the employer, use unique licensed software. Academic staff is now being trained at the company, updating the content of laboratory works on a modern basis. The company demands for skilled graduates possessing competencies in accordance with the requirements.



Jointly set up by the Department of Taxes and Taxation BSEU and the Ministry of Taxes and Duties, Research laboratory is launching today a number of projects. A number of members of the department and the ministry, as well as students, undergraduates and graduates are involved in its activities. Currently we are opening a new Scientific Research Laboratory of the Department of Finance.

The interaction stipulated also that industry would supply university with modern hardware and software training systems, expensive literature, awarding best students the scholarships for excellence in education and research.

In order to inform all the stakeholders about the process of assignment/distribution we created a separate web-site "Start-career" (Fig. 4.2 – 4.5) on the university site - a system of support for young professionals' employment. The site is available for students, employers and other stakeholders.

The site includes:

- Regulations on the order of distribution, redistribution, documents containing mandatory job placement, subsequent job placement of university postgraduates, graduates, and those with vocational or technical education;
- Regulations on the procedure for refunding to the republican and (or) local budgets of the funds spent by the government on training of highly qualified scientist, specialist, worker, employee;
- Schedule of the distribution/assignment of graduates of Belarusian State Economic University in the current academic year;
- Registration page for placing resume and available vacancies;
- Materials to help young professionals (career building strategy, CV sample, first interview with the employer, adapting to a new team, etc.);
- A list of partner organizations, announcing an open competition for the existing vacancies and the conditions;
- The announcement of events, held at the University to assist graduates with employment (job fairs, round tables, seminars, workshops, etc.).

The site allows to enter the database of vacancies Minsk city employment center.



Fig. 4.2 – Web-site "Start-career" (News)



Fig. 4.3 – Web-site "Start-career" (Graduate Placement)



- О проекте
- Работодателям**
  - Распределение выпускников БГЗУ
  - Положение о распределении
  - Добавить вакансию
  - Ваши вакансии
  - Поиск резюме
- Выпускникам**
  - Положение о распределении
  - Положение о возмещении средств, затраченных на подготовку специалиста
  - График распределения
  - Добавить резюме
  - Поиск вакансий
- Практика**
  - Заявка на практику
  - Положение о практике
  - Обязанности руководителя
  - Обязанности руководителя от предприятия
  - Обязанности студента
  - Программы практик

# СТАРТ-КАРЬЕРА

Система поддержки трудоустройства молодых специалистов БГЗУ

## Заявка

**Уважаемые работодатели!**

Сотрудничая с нами, Вы получаете шанс укомплектовать Ваш штат перспективными молодыми специалистами, обладающими высоким уровнем знаний экономических дисциплин, иностранных языков, современных компьютерных технологий. Преддипломная практика продолжительностью 8-14 недель – отличная возможность на безвозмездной основе проверить деловые и личностные качества возможных кандидатов на вакантные места и выбрать наиболее для Вас подходящих.

Перечень специальностей и специализаций, информация о сроках проведения практики размещена [здесь](#).

Мы будем рады видеть Вашу организацию в составе баз практики, с которыми университете поддерживает тесные контакты многие годы.

**Заявка**  
 на прохождение производственной практики  
 студентами БГЗУ

Название предприятия <small>(организации, учреждения)</small>	<input style="width: 90%;" type="text"/>
Специальность (специализация) <small>(если несколько - указать каждую)</small>	<input style="width: 90%;" type="text"/>
Количество практикантов	<input style="width: 90%;" type="text"/>
Адрес	<input style="width: 90%;" type="text"/>
Телефон	<input style="width: 90%;" type="text"/>
E-mail	<input style="width: 90%;" type="text"/>

Fig. 4.4 – Web-site "Start-career" (Request for Students' internship)



- О проекте
- Работодателям**
  - Распределение выпускников БГЗУ
  - Положение о распределении
  - Добавить вакансию
  - Ваши вакансии
  - Поиск резюме
- Выпускникам**
  - Положение о распределении
  - Положение о возмещении средств, затраченных на подготовку специалиста
  - График распределения
  - Добавить резюме
  - Поиск вакансий
- Практика**
  - Заявка на практику
  - Положение о практике
  - Обязанности руководителя
  - Обязанности руководителя от предприятия

# СТАРТ-КАРЬЕРА

Система поддержки трудоустройства молодых специалистов БГЗУ

## Карьера в "Делойт и Туш"

Весной наша компания проводит очередной набор сотрудников на вакансии, которые могут заинтересовать выпускников БГЗУ.

Наша главная задача - предоставление услуг высочайшего качества, поэтому наша компания предъявляет высокие требования к профессиональному уровню сотрудников и кандидатов.

Компания заинтересована в приеме на работу сотрудников, уже имеющих опыт работы, а также предоставляет возможность для блестящего начала карьеры выпускникам и студентам экономических специальностей высших учебных заведений. Залогом нашего нынешнего и будущего успеха является профессионализм сотрудников, энтузиазм и приверженность целям компании.

**Приглашаем Ассистента аудитора**

*Требования:*

- Студенты выпускных курсов экономических факультетов
- Желание работать и развиваться в динамичной среде международной компании
- Уверенное владение английским языком и компьютером
- Знание принципов бухгалтерского учета
- Знание основ МСФО будет существенным преимуществом



Fig. 4.5 – Web-site "Start-career" (Example of Vacancy)

Large section of the site is dedicated to students' internships, as one of the main directions of the University's interaction with business entities.

The section provides:

- Regulations on internships of BSEU students of full time and correspondence departments;
- University and company supervisors' duties, student responsibilities;
- Programs of all types of internships;
- Normative documents, their shapes, and filled samples;
- A list of base university organizations;
- A form of enterprise applications for students internships;
- Internship Schedule in the current academic year.
- Employers' suggestions for University students to serve their internships.

BSEU cooperates with enterprises through advanced training and retraining. Information about the University opportunities in this area can be found on the website of the "Start-career" and the Institute of advanced training and professional development in economics.

The site contains:

- Information on special training, the admission and the conditions of admission;
- Areas of advanced training;
- Courses, seminars, workshops;
- Programs.

Information about the University scientific activity is on the page devoted to R&D Centre of BSEU site.

The page contains:

- The theme of scientific research of the departments;
- The order of registration of economic contracts with enterprises and companies;
- The procedure for deliveries and reports;
- A list of competitive scientific works;
- Current information.

In addition, the website of the University contains students R&D works, with a list of scientific publications of BSEU with developments in the field of economic sciences, available scientific and pedagogical schools, with the ongoing internal and external research activities.

Since the beginning of the UNITE project on BSEU site we created a page containing information about its progress (Fig. 4.6 – 4.9).



Fig. 4.6 - Website «TEMPUS UNITE» (News)

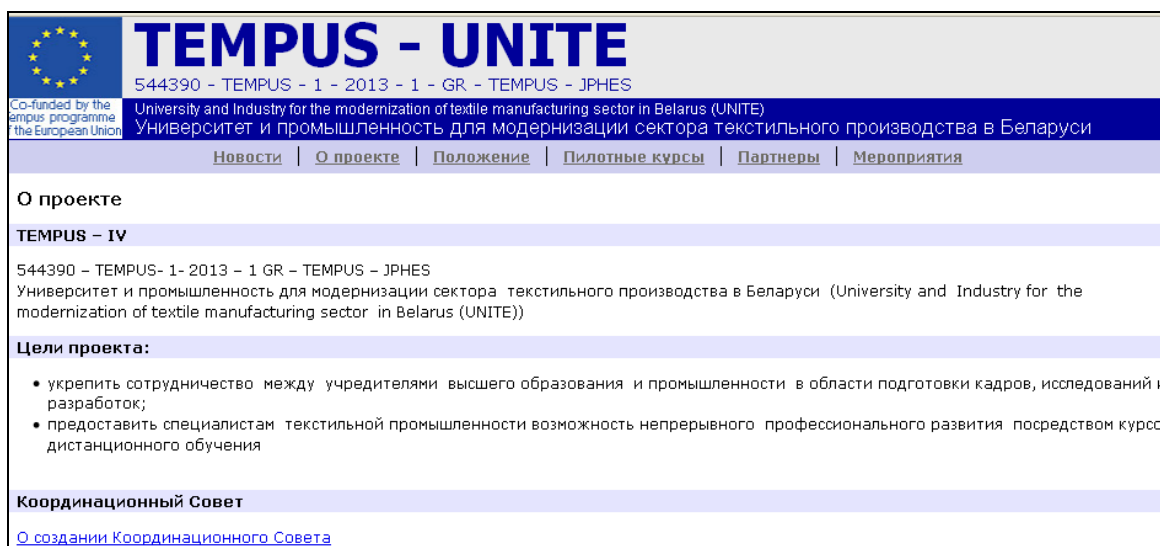


Fig. 4.6 - Website «TEMPUS UNITE» (About the project)


The page contains:

- Information about the project, the project's objectives;
- Project partner organizations;
- The body of the Coordinate Council;
- The activities carried out within the project;
- The Case of the interaction of EI BSEU with enterprises and organizations of the real sector of the economy;

- Pilot online courses as an alternative of teaching materials to improve the students' skills;

- Current News.

Information on the project is available to all stakeholders and companies.



# TEMPUS - UNITE

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University and Industry for the modernization of textile manufacturing sector in Belarus (UNITE)  
Універсітэт і прамысловасць для модернізацыі сектара тэкстыльнага прадукцыі ў Беларусі

[Новости](#) | [О проекте](#) | [Положение](#) | [Пилотные курсы](#) | [Партнеры](#) | [Мероприятия](#)

## Партнеры

### Координационный Совет

Для согласования работы по проекту создан Координационный Совет, в который вошли представители концерна «Беллепром», предприятий легкой промышленности, университетов.  
БГЭУ в координационном совете представляет первый проректор Садовский В.В., доктор технических наук, профессор (тел. +375 17 209-88-44).

### Организации – партнеры

№ партнера	Роль	Название организации	Город	Страна
П1	Заявитель	Технологический образовательный институт Пирея (TEIPIR)	Эгалео	Греция
П2	Партнер	ИДЭК – Консалтинговая организация в области применения Высоких технологий (IDEC)	Пирей	Греция
П3	Партнер	Гентский университет (UGent)	Гент	Бельгия
П4	Партнер	Университет Бийра Интериор (UBI)	Ковилья	Португалия
П5	Партнер	Технологический центр текстиля и одежды (CITEVEG)	Вила Нова	Португалия

Fig. 4.8 - Website «TEMPUS UNITE» (Partners)

### 13 октября 2015 г.

13 октября прошло 5-ое координационное собрание участников проекта Темпус Юнайт, участники которого обсудили результативность выполнения этапов проекта БГЭУ.

Проект Темпус Юнайт направлен на укрепление сотрудничества вузов и промышленности в области подготовки кадров, предполагает как практические наработки так и научные исследования по теме «Университет и промышленность для модернизации сектора текстильной промышленности в Беларуси».

На прошедшей встрече гости из Греции (Университет прикладных наук Пирея), Португалии (Университет Бийра Интериор), Испании (Политехнический университет Валенсии), Литвы (Каунасский технологический университет) и представители рабочей группы БГЭУ обсудили выполнение очередных этапов проекта: онлайн-курсы непрерывного профессионального развития, сбор материалов для дистанционного обучения, пилотные курсы для непрерывного профессионального развития.

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Представители зарубежных вузов высказали мнения по обсуждаемым вопросам и дали оценку работе, проделанной специалистами нашего университета.

Далее участники проекта продолжили свою работу в Витебском технологическом университете, где состоялась конференция по вопросам «Текстильное образование: состояние, тенденции и перспективы развития». С докладом «Текущее состояние и перспективы сотрудничества БГЭУ с предприятиями реального сектора в области повышения квалификации кадров» выступила декан факультета ИПКиПЭК В.В.Примщиц. Интерес к этой теме совсем не случаен: сегодня многие белорусские предприятия легкой промышленности переживают период модернизации и реструктуризации и заинтересованы в подготовке кадров.






Fig. 4.8 - Website «TEMPUS UNITE» (5<sup>th</sup> Coordination meeting in BSEU)

## 4.2. Organizing workshops by BSEU to provide delivery to beneficiaries

The program of the project includes the seminars on the implementation with the participation of Belarusian universities and enterprises of various sectors of the economy.

BSEU has organized 2 workshops. One took place at the University and the other at Baranovich State College of Light Industry named after V.E. Chernyshev.

Minsk Workshop "University - Enterprise: together to success"  
16.04.2015

*Chair:* V.V. Sadovski

*Secretary:* S.K. Matalytskaya

**Attended:** 46 persons, including the representatives of the real sector of economy 19 persons, among them the representatives of light industry: head of the Department of coordination the development of the textile industry of "Bellegprom" Lapchenko I.S., director of the Center of Scientific Research in light industry Silich T.V., head of the Department of staff of "Orsha Linen Mill" Antonova I.D., head of the Department of "Orsha Linen Mill" Eytsenko I.B., Chief Engineer of "Alesya" Radyuk T.A., General Manager of "Trikotazhtorg" Kobza I.E., deputy director for commercial issues of "Slavyanka" Drobov Y.I., director of "Tekstiltorg" Fateev S.D., Director of "Galanteya" Nabdzorov A.A. (registration lists are attached).

### **The seminar program:**

- Current state of co-operation of higher education and enterprises in the Republic of Belarus.
- Problems and prospects of cooperation of universities and business in the Republic of Belarus.
- Foreign experience of forms of interaction between higher education and businesses.
- Areas of BSEU cooperation with the real sector of the economy.
- The formula of success for business - staff development.
- Discussion of topical issues of interaction between universities and enterprises (roundtable, discussion).

Representative of JSC "Alutech" shared his experience of cooperation with the companies. He spoke about the organization of students' internship, mutual work on employment of graduates, the participation of enterprises in curriculum development.



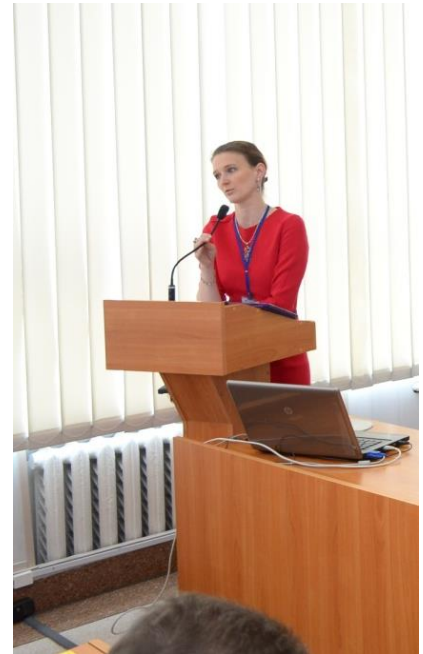


Fig 4.9 - Workshop in Minsk



Workshop in Baranavichi "Improvement of training system for textile industry" took place on December 3, 2015.

The workshop was attended by 23 people including the representatives of JSC "Brest Carpets", JSC "Polesie", JSC "Baranovichi Sewing Factory", Vitebsk State Technological University, MSUP, BSEU, BarSU, Kaunas University of Technology (KTU).

The workshop included presentations:

- Current state and prospects of training specialists for the textile enterprises of the Republic of Belarus (Vitebsk State Technological University);
- Current state and problems solution of professional development for textile and light industry ( MSUF);
- Development of interaction with enterprises of textile industry to prepare qualified specialists (MSUF);
- Improvement of efficiency of supplementary education for adults through distance learning technologies (BarSU);
- Science, Education and Textiles in EU and Lithuania: Analysis and Prospects (KTU);
- Areas of cooperation of BSEU and the real sector the economy in advanced training of enterprises (BSEU).

A discussion followed after the reports.

For the participants of the workshop there was organized an excursion to the RUE "Baranovichi Cotton Production Association", where they got acquainted with the manufacturing techniques of yarns and fabrics.

BSEU representatives also participated in seminars organized by Vitebsk State Technological University and MSUF. Participation in seminars provided various organizations an opportunity to share their interaction experience and use it in their work.



Fig 4.10 - Workshop in Baranovichi

### **4.3. 5<sup>th</sup> Coordination Meeting and Job Fair**

On October 13, 2015 the BSEU organized and hosted 5th TEMPUS UNITE coordination meeting of the project partners. The meeting was attended by epy representatives of the universities of Greece, Spain, Portugal, Belgium, Lithuania and Belarus.

Each of the partners made a presentation of the project work packages. Then they discussed the coordination and financial issues of the project, pilot courses development, activities of the interaction departments, and proposals for the sustainability of the project.

During the project the Belarusian State Economic University hosted two job fairs - October 17, 2014 and October 13, 2015.

The main purpose of these events was to create conditions for direct contact of employers with graduates of the University, with the staff of the faculties and departments to address the issues of students internships, employment of young specialists, strengthening the cooperation of the institution with the real sector of the economy. The Fair fully corresponds with the project objectives and contributes to their solution.

Organization of the fair was preceded by extensive preparatory work: preparing orders, specifying the tasks. The Office of Rector controls the execution. The newsletters (the content is approved by the Office of Rector) are sent to companies by e-mail. The details are elaborated through correspondence or telephone. Information is posted on the University website. To participate in the preparation of the fair we attracted newspaper "Work Today", "Work for You", the portal PRACA BY, Minsk city employment center. Organizations that decided to participate in the fair, inform the university.

The event in 2014 hosted 67 companies, which offered 327 vacancies for employment of graduates of Belarusian State Economic University, 463 venues for practical training.

In 2015 the fair was attended by 58 companies. Employers offered 354 positions for employment and over 500 venues for practical training.





Fig 4.11 – Coordination Meeting in Minsk





Fig 4.12 – Job fair in the Belarusian State Economic University, Minsk, 2015.

#### **4.4. Customer satisfaction survey**

At different stages of interaction it is necessarily to carry out a survey of different categories of respondents to assess their satisfaction with the quality of university training and other services. The survey is conducted as part of the quality management system, during the job fairs, upon completion of internship service. The University involved in TEMPUS «UNITE » obtained an opportunity to assess the cooperation of higher education institutions and enterprises of the real sector. Proposals expressed by the participants of the survey are the basis for improvement of the activity, preventive and corrective actions.

The forms/ questionnaires take into account the specifics of each event.

Below are the results of the survey conducted in 2015 on issues relating to joint activities.

1. Evaluation of customer satisfaction carried out in the framework of the quality management system of the University.

Respondents - consumers of R&D products - 20, employers – 288, BSEU graduates with experience – 499, students – 2522.

The average percentage of the scientific production of customer satisfaction according to the criteria included in the questionnaire ranges from 89.6% to 97.6%.

The highest score was obtained for the criteria of "practical significance" (97.6%) and "theoretical level" (awareness, the validity of the methodology, findings and proposals) (96%).

93.6% of the consumers of R&D products are eager for further cooperation with BSEU.

The respondents expressed their wish more actively to involve postgraduates in research, to study deeper needs and expectations of consumers, to put into practice the results of R&D.

The average percentage of employers' satisfaction with the quality of training amounted to 88.2%. The highest score was obtained for the criteria of "Meeting your needs" (93.7%), "The professionalism and competence of the graduate" (90.1%), "The relevance of graduate's knowledge" (89.6%), the lowest - for the criterion " promptness of the university in responding to your requests" (84.7%).

Employers recommend:

- To carry out joint production activities involving students;
- To organize off-site training in the workplace;
- To invite experts to the educational process;

- To study carefully rules and regulations;
- To improve IT skills of students;
- To teach to draw conclusions and forecasts.

82.7% of the graduates having work experience are satisfied with training at Belarusian State Economic University. The graduates were highly satisfied with the criterion "The professionalism and competence of teachers" (87%), the lowest score get the criterion of 'Usage of innovative educational technologies" (78.3%), which was one of the main improvement activities of the university.

Students are encouraged to pay more attention to practical training, conduct business games according to profession, round-table discussions with experts invite teachers-experts to conduct trainings. The average students satisfaction was rated as 82%.

2. The interaction between the university and enterprises was estimated in the course of the job fair, held 17.10.2015 .

44 representatives from employers and 271 students took part in the survey.

BSEU graduates work in 90.9% of the organizations, which took part in the survey. 88.6% of the respondents are satisfied with the training.

Among the criteria of evaluation of young specialists in the degree of importance the employers identified:

- The ability to adapt quickly (91.4%);
- Ability to work independently, plan their work (91.2%);
- Ability to work in a team (90.7%);
- Computer literacy (89.5%);
- Relevant knowledge (87.4%);
- The level of theoretical knowledge (81,95);
- Compliance of a position claimed by a specialist with the specialty (75.7%);
- Knowledge of foreign languages (73.3%);
- Good marks (69.5%);
- School and faculty the specialist graduated from (67.4%);
- Ability to work with business correspondence (66.1%);
- Work experience (51.9 % ).

The main wish of the employers was the development of practical skills.

The results of the fair satisfied 86.4% of the respondents, more than half of companies were willing to be the base organization for the university.

Evaluating their satisfaction with the quality of training, students rated as lowest the organization of internship and information technologies in the educational process.

66% of students were satisfied with the information obtained at the job fair.

During the fair 32% of respondents found the company to serve internship, 16% found their first job - Many organizations have been invited to interview for.

### **3 . Student Assessment of pre-graduation internship in 2015.**

The survey involved 1,015 students, among them: the young men-students - 26.1%, students-girls - 72% did not answer - 1.9%.

The predominant age of the respondents was 19-21 years.

The survey involved students of 10 faculties.

Approximately equal number of students from the budget (48.2%) and commercial (50.7%) forms took part in the survey .

The survey revealed that 24.6% of the students highly assessed the organization of internship and 30.7% - higher than average -. Thus the majority of students 55.3% highly rated the internships.

Average rating was given to the organization of internship by 30.0% of the students. 5.5% of the respondents assessed it below the average. 4.3% of students rated the internship the lowest.

On the whole, general supervision (on part of the department) of pre-diploma internship was rated as the "high" by 30.0% of students and by 31% of students as "rather high". Thus, 61.9% of the respondents rated high the pre-diploma internship supervision on the part of the department. 42.7% of the students rated internship as average. 9.2% of the students evaluated the internship's supervision on part of the department - as a "low and rather low".

Fully satisfied with the distribution to the base organization to serve pre-diploma internship were 34.7% of students and rather satisfied - 37.5% of the students. Thus, the satisfaction with the level of the distribution procedure into internship bases is high (72.2%). According to the survey 11.7% of respondents were "rather unsatisfied" and 4.3% of students were "fully unsatisfied".

Among the respondents, 79.9% of students indicated that they met their wish with the base organization to serve their pre-diploma internship, while only 18.8% of students passed the practice in other enterprises.

The following channels were used to distribute students to the bases of internship:

- 38% of the students picked their own internship base directly applying to the enterprise to be trained in it;



- 25.0% of the students were distributed into the base chosen by the staff of the Department;

- 25.4% of the students picked up the base applying to their parents / relatives;

- 9.2% of the students had to use the help of their friends and acquaintances to find the base of internship.

- 0.7% of the students picked up the internship base organization on "Job Fair BSEU".

Fully satisfied with the supervisor's appointment (on part of the department) were 41.1% students and rather satisfied - 39.2% of the students. Thus, the level of satisfaction with the appointment of supervisors from the university is high (80.3%). "Rather unsatisfied" were 7.4% of the respondents and "fully unsatisfied" - 3.7% of students.

Before the internship the supervisors from the university conducted organizational conversation. 86.1% of the students attended. 8.2% of the students knew about the conversation, but did not attend it.

During the conversation, the Head of University's Internship fully explained the procedure of internship. 68.8 % students fully understood their tasks and 24, 1 % of students partially understood them. Difficulties with understanding of internships had only 3.8% of the respondents .

According to the survey 39.9% of the students pointed that during the externship the University's supervisor constantly kept in touch with them (counseling, controlling), 39.8% of students noted that from time to time they had to interact with their supervisors from the University during the internship.

Business Supervisors of internship (on part of the enterprises: institutions, organizations) fulfilled their functions at the appropriate level: constant counseling on the issues under the program of internship were received by 49.1% of the students, 37.3% of students pointed that the industrial supervisors counseled them from time to time, when they had questions.

53.1% of students consider that business supervisors of the internship provided them an opportunity to use materials, primary documents and other forms of reporting required to the full extent, 40.7% of the students - partially.

During the pre-diploma practice in the enterprise has been provided participate in practical work for 79.7% of students did not get the opportunity to 19.9% of the students.

During the internship 74.7% of the students could solidify the knowledge acquired in the process of education, 69.4% of the students acquired practical skills for their specialty.

Belarusian State Economic University trains personnel for the entire economy of the republic. It interacts with companies in various industries. As an example of such a partnership, on March 9, 2016, it called a meeting of representatives of institutions of higher education with the General Director of JSC «Amkodor» - managing holding company for cooperation, including promotion of graduates employment and providing venues for industrial, undergraduate, and other types of internships. The meeting was attended by the representatives of Belarusian State Economic University, Belarusian National Technical University, Belarusian State Technological University, «Amkodor» staff. At the meeting they decided upon further steps for cooperation in various fields of activity.

The University activities to establish and strengthen cooperation with enterprises can successfully solve the problems of students' internships, graduates' employment; organize educational process with the assistance of qualified experts – skilled specialists.

Thanks to participation in the TEMPUS UNITE project BSEU has elevated its activities to higher standards.

## **5. ACTIVITY OF TEIPIR RELATED TO EXPLOITATION OF THE UNITE PROJECT**

### **5.1 Workshop at TEIPIR on 25/9/2014 (Deliverable: extra dissemination activities)**

TEIPIR organized a workshop «The necessity of career and liaison offices in Education Institutes» on 25-9-2014. The workshop was carried out at the premises of T.E.I. of Piraeus. It was organized during the "International week" of TEI of Piraeus, in order to have the maximum numbers of audiences from all the world. The program was the following.

<b>14:00-14:20</b>	Registration
<b>14:20-15:50</b>	Dimitrios Tseles, "The advantages of the operation of a liaison office in a Technological Institute and the knowledge transfer to non-EU countries" Presentation of the invited Universities
<b>15:50 – 16:10</b>	Georgios Nikolaidis, “The importance of patents for the strengthening of the market in the period of the financial crisis” Presentation of Universities
<b>16:10-16:40</b>	Georgios Priniotakis “Specification of the industry’s necessities in nowadays – the role of Tempus activities to the connection of the industry with the education” Presentation of the invited Universities
<b>16:40 – 17:10</b>	Evangelos Louris, “Dissemination policies towards the success of the UNITE project” Presentation of the invited Universities
<b>16:40 – 17:40</b>	Scientific representative of Liaison office or Career office Presentation of the invited Universities
<b>17:40 – 18:20</b>	Discussion

## 5.2 Workshop organized by IDEC-TEIPIR on 03/06/2015 with title “Technology transfer: from research to industry”(Deliverable: extra dissemination activities)

It was conducted successfully the two parallel workshops which were organized by the Piraeus University of Applied Sciences and IDEC Company on Wednesday 03/06/2015 at the premises of PUAS, in the frame of the TEMPUS-UNITE project. The conference was attended by representatives of stakeholders involved in technology transfer, professors, researchers and students.

### Invitation-Program

The presentations of the conference:

- The importance of technology transfer for economic development - Sophia Spiliotopoulou, IDEC Company, CEO
- The importance of knowledge for manufacturing enterprises - Constantine Kampolis, President Manufacturing Department of Commerce and Industry Piraeus Chamber
- Presentation of the project UNITE - GeorgiosPriniotakis, Assoc. Professor Piraeus University of Applied Sciences
- Presentation of the ETM - Lila Anthopoulou, IDEC Company, Director



Photo 1



Photo 2



Photo 3

Fig. 5.1. - Workshop

Photo 1	1.V. Panagou, Vice President of PUAS (TEIPIR) 2.S. Spiliotopoulou, IDEC Company 3.G.Priniotakis, Ass. Professor of PUAS (TEIPIR)
Photo 2	1.V. Panagou, Vice President of PUAS (TEIPIR) 2. S. Spiliotopoulou, IDEC Company 3. G.Priniotakis, Ass. Professor of PUAS (TEIPIR)
Photo 3	S. Spiliotopoulou, IDEC Company

### **5.3 Dissemination activities of Tempus Project – Workshop at PUAS 18/11/2015 (Deliverable: extra dissemination activities)**

On 18/11/2015 was held a roundtable at the premises of Piraeus University of Applied Sciences, attended by representatives of textile and garment manufacturing companies. The discussion focused on market requirements regarding the qualifications of the directors of the respective companies and how they correlate with the curriculum of the department of Textile Engineering T.E. During the discussion accomplished the dissemination of Tempus project results and placed the issue about its sustainability after the end of EU funding. The relationship was created between market members and representatives of Education in the field of Textiles will be sustained after the end of the project, in order to exchange ideas on a regular basis and adapt the study program according to market requirements through the updating of study program of the respective departments.

The needs of Textile and Ready Garment companies are differentiated from each other mainly in Greece, since the requirements in Textile companies focus on knowledge of production processes, technology production systems, CAD CAM, etc, while the Ready Garment companies give priority to the organization and administration.

So, a suggestion would be to establish a study program in Textile Engineering which will offer two directions at the sixth semester: one focusing on the production of textile products and the other focuses on the organization and management a) Construction products and b) human resources.

#### **List of Participants:**

	<b>PARTICIPANTS</b>	<b>COMPANY</b>		<b>PARTICIPANTS</b>	<b>COMPANY</b>
1	M. Karampinis	HCIA	11	E. Georgiou	"EGEORGIU"
2	B. Sprintzios	"APAXNH"	12	D. Georgiou	"EGEORGIU"
3	V. Kalyvas	PUAS MEMBER	13	D. Kapsalis	"FOTOPOULOU GTP"
4	N. Koklas	PUAS MEMBER	14	I. Chronis	PUAS MEMBER
5	E. Louris	HTEA	15	G. Papagiannis	THRACE NG
6	D. Giannakopoulos	PUAS MEMBER	16	G. Priniotakis	PUAS MEMBER
7	G. Kalaras	"MACOTEX"	17	E. Gialinou	PUAS MEMBER
8	B. Masselos	"NOTA"UNDERWEAR	18	D. Kyriakou	PUAS MEMBER
9	S. Mentis	MUSEUM OF BENAKI	19	M. Sigala	PUAS MEMBER
10	D. Vinias	FASHIONPHORIA			



Fig. 5.2. – Workshop

## CONCLUSIONS

1. In accordance with the workplan of the UNITE project with concern Bellegprom a coordinating council to support the textile education (UNITE Council) was created. The Council board is formed on the basis of an analysis of the existing system of interaction between universities and textile enterprises. The Council includes representatives of Belarusian partners, as well as 10 companies and research center. During two Council meetings the most important matters of the liaison were discussed such as the organization of industrial internship, graduates placement, professional orientation, retraining of specialists of textile enterprises.
2. On the basis of the analysis of functions of structural Belarusian universities subdivisions concerning the interaction with industry, it were made adjustments to the normative documentation that regulates their activities. These changes improve the efficiency of liaison processes. During the period of implementation of the project taking into account of enterprises offers educational programs were revised, the list of tasks compiled that are appropriately addressed within the framework of research work students.
3. The websites of universities contains information about the project, as well as provides services that allow the students to search the first work place. Universities held a job fair on which the graduates were able to establish contacts with employers.
4. Belarusian universities have organized workshops in all the regions of the country, where results of the project were represented and the most important issues of cooperation between universities and textile enterprises were discussed. Results of the discussions will form the basis for further improvement of the education system in the training of specialists for textile enterprises.