



**Education & Research:
innovation potential of Belarus
and Belarusian State University**

Sergey V. Ablameyko

Rector of the Belarusian State University
Academician of the National Academy of Sciences of
Belarus



**HIGHER EDUCATION
in the
REPUBLIC OF BELARUS**



Higher education institutions in Belarus

51 HEIs: **42** - State, **9** - Private



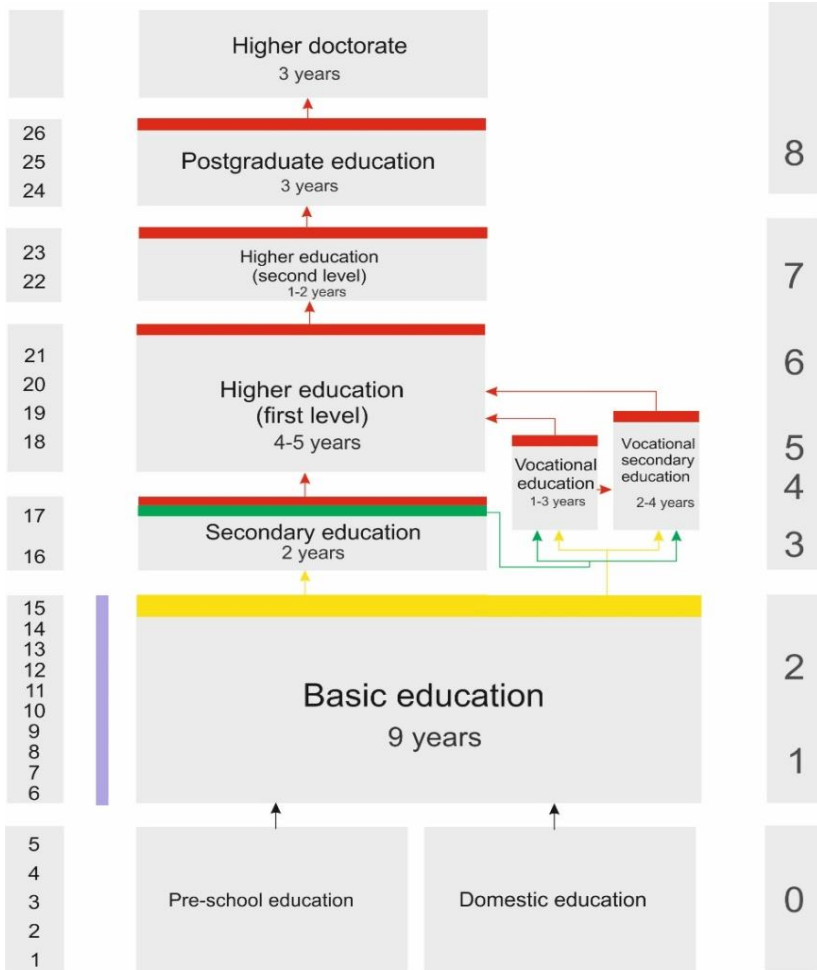
34 Universities;
9 Academies;
8 Institutes

Affiliation:

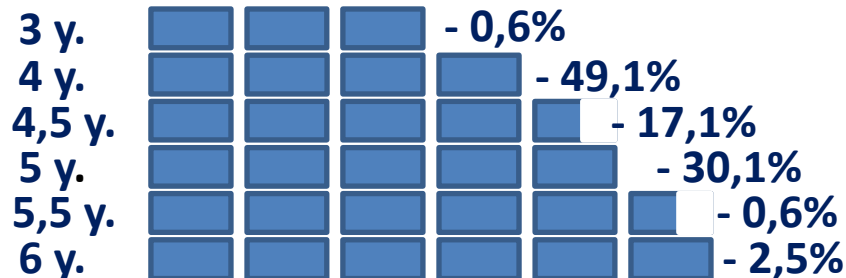
Ministry of education – **21**
Ministry of Agriculture – **4**
Ministry of Health – **4**
Ministry of Culture – **3**
Other – **10**



Russian Education Institutions (branch in Minsk):
- Russian State Social University (RSSU);
- Plekhanov Russian University of Economics (PRUE)



Higher Education Specialties



— final examinations
 — basic school examinations
 — compulsory education
 1 - 26 Age
— secondary school final examinations
 → to the next level of education
 0 - 8 ISCED-2011



I level of higher education – conducts training of specialists with basic and special knowledge and skills certified as specialist with higher education.



Educational programme of the I level of higher education assures obtaining specialist qualification with higher education;



Educational programme of the I level of higher education integrated with post-secondary educational program.



II level of higher education (Master's programme) – provides in-depth training, develops knowledge and academic methodology and research skills, assures obtaining a Master's degree.



Educational programme of the II level of higher education forms knowledge and academic methodology and research skills;



Educational programme of the II level of higher education with in-depth specialist training .

There are 13 programmes taught in English.

First level of Higher Education (equivalent of Bachelor's programme)



ISCED– 6 Level «Bachelor`s degree programme»



Course duration: 4–4,5–5 years, ECTS – 240–300



Medium of instruction: Russian / Belarusian / English



Free education for citizens:



Kazakhstan



Kyrgyzstan



Russia



Tajikistan



More than 380 educational programmes:

30

Pedagogics

24

Art and
Design

12

Humanities

48

Law,
Economics,
Management

27

Natural
sciences

5

Ecological
sciences

137

Technics
and
Technology

12

Architecture
and
Construction

23

Rural and
Forestry

9

Medical
Care

8

Tourism and
Hospitality

47

Security
Service

Second level of Higher Education (Master`s degree programme)



ISCED– 7 Level «Master`s degree programme»



Course duration: 1–1,5–2 years, ECTS – 60–120



Medium of instruction: Russian / Belarusian / English



Free education for citizens:



Kazakhstan



Kyrgyzstan



Russia



Tajikistan



More than 300 educational programmes:

8

Pedagogics

5

Art and Design

27

Humanities

60

Law,
Economics,
Management

27

Natural sciences

7

Ecological sciences

86

Technics and Technology

14

Architecture and Construction

22

Rural and Forestry

31

Medical Care

4

Tourism and Hospitality

23

Security Service

Number of theses defended by the staff of institutions of the Ministry of Education of the Republic of Belarus:

	2011	2012	2013	2014	2015	2016
Candidate's Dissertation	214	190	202	173	251	164
(% of the total number of defenses in the country)	41,2	38,5	39,5	35,2	48,9	36,4
Doctoral theses	17	16	17	14	21	20
(% of the total number of defenses in the country)	36,2	34,8	43,6	31,1	43,8	45,5

The number of students in postgraduate and doctoral studies of institutions of the Ministry of Education:

	2011	2012	2013	2014	2015	2016
postgraduate studies, total.	3226	3147	2963	2736	2749	2802
doctoral studies, total.	80	81	83	107	142	180

The main directions of development of higher education



Improving the quality of training specialists. Increasing the effectiveness of practice-oriented training and deepening ties with employers.



Enhancing the competitiveness of higher education in the global educational space.



Improving of the planning system and optimization of the structure of training of specialists with higher education.



Optimization of the higher education system and improving the management of the system of higher education.



Improving of the material, technical, educational and laboratory base of higher education institutions.

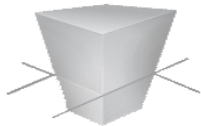


BELARUSIAN
STATE
UNIVERSITY

The scientific activity of universities: the main directions of research



www.icm.by
Intercollegiate
marketing center
research developments



www.imu.metolit.by
Information and
marketing center of the
Ministry of education of
the Republic of Belarus

- ✓ Information technology and computer technology;
- ✓ Power engineering and metallurgy;
- ✓ Medicine;
- ✓ Mechanics, electrical engineering;
- ✓ Construction, architecture;
- ✓ Maths, physics;
- ✓ Machine building;
- ✓ Materials Science;
- ✓ Instrument making;
- ✓ Transport;
- ✓ Earth sciences, ecology;
- ✓ Psychology, history, culture, economics, education;
- ✓ Electronics and photonics, nanotechnology, biotechnology, chemical technologies, space research

There are contracts between Belarusian universities and partners from 64 countries of the world within the framework of more than 1820 agreements

Teaching staff of Belarusian universities

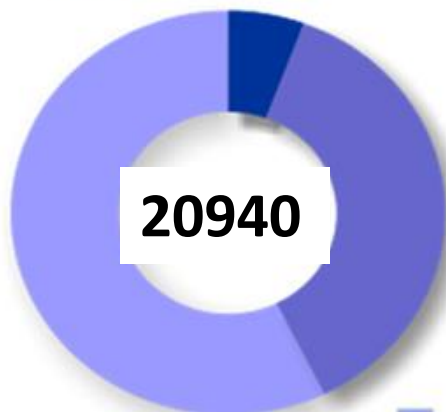
Teachers with scientific degrees (%)



45% State higher educational institutions

41% Private higher education institutions

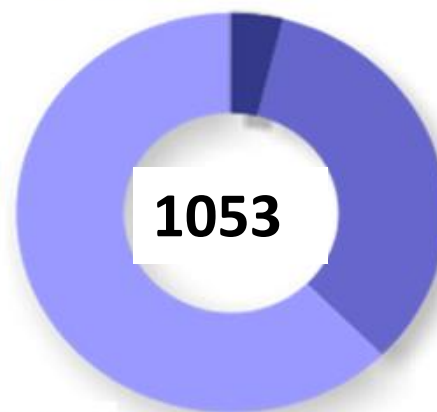
State HEIs



21993

Teachers working
at HEIs

Private HEIs

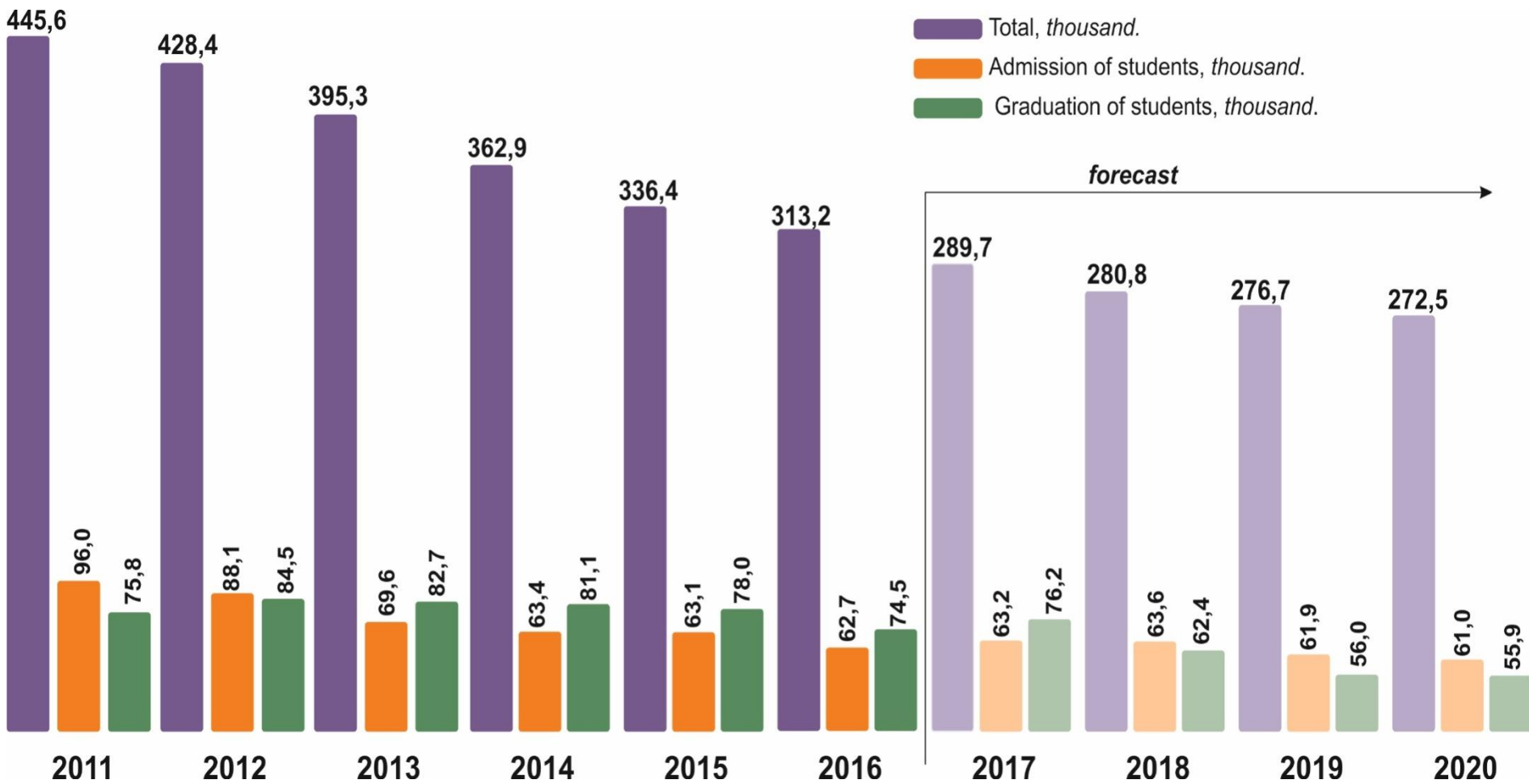


- Teachers with scientific degrees
- Ph.Ds
- Higher Ph.Ds

More than 1 thousand teachers annually participate in the educational process at universities of Russia, Lithuania, Poland, England and others.

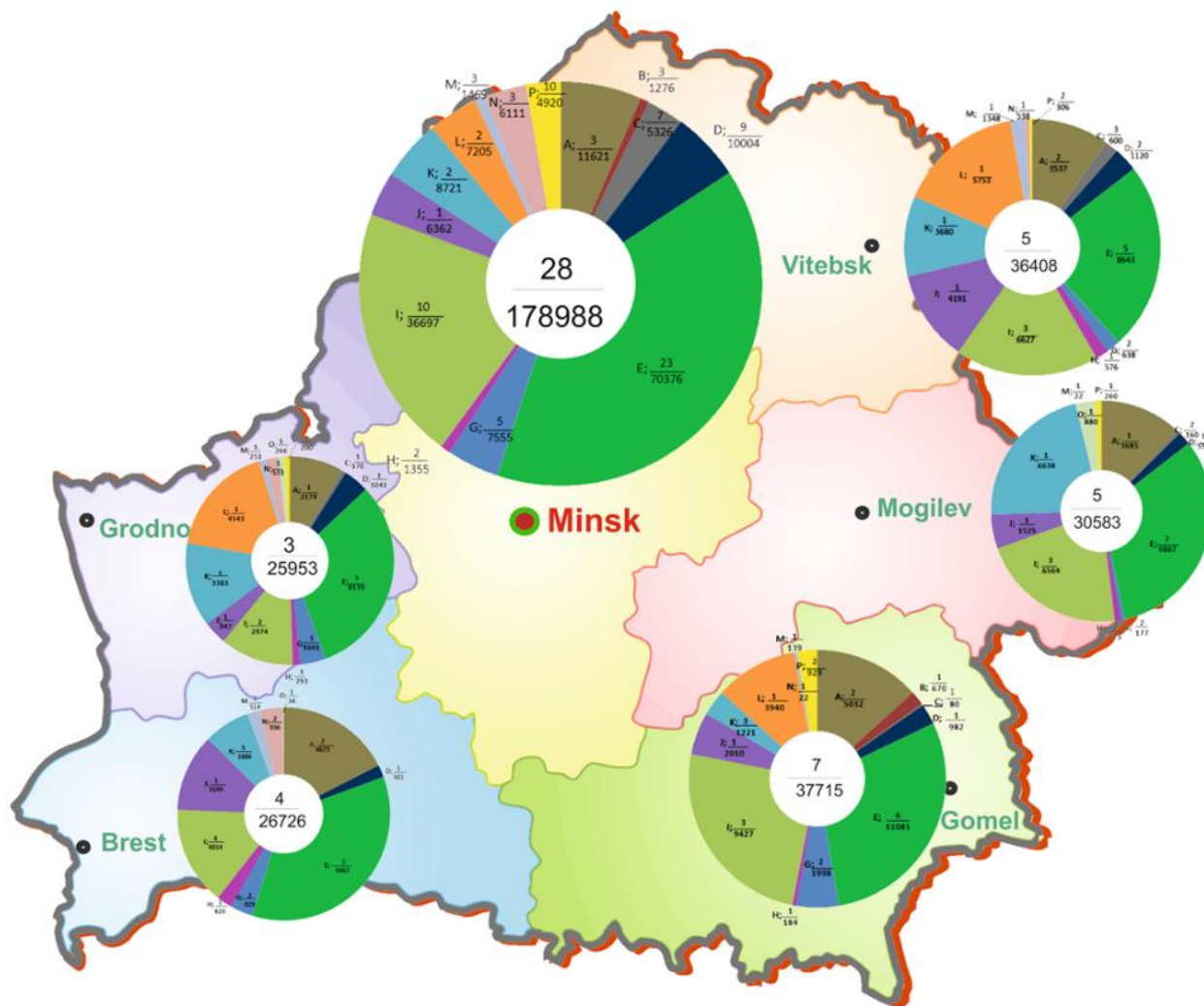


Number of students (I Cycle)





Student contingent by region and education profiles



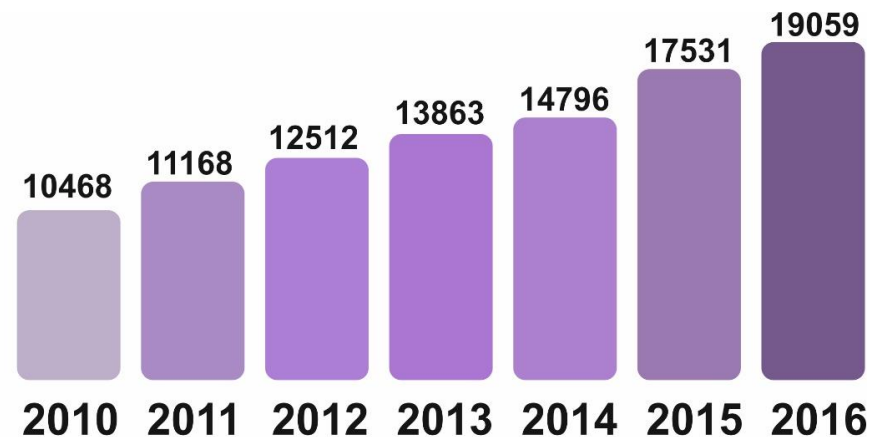
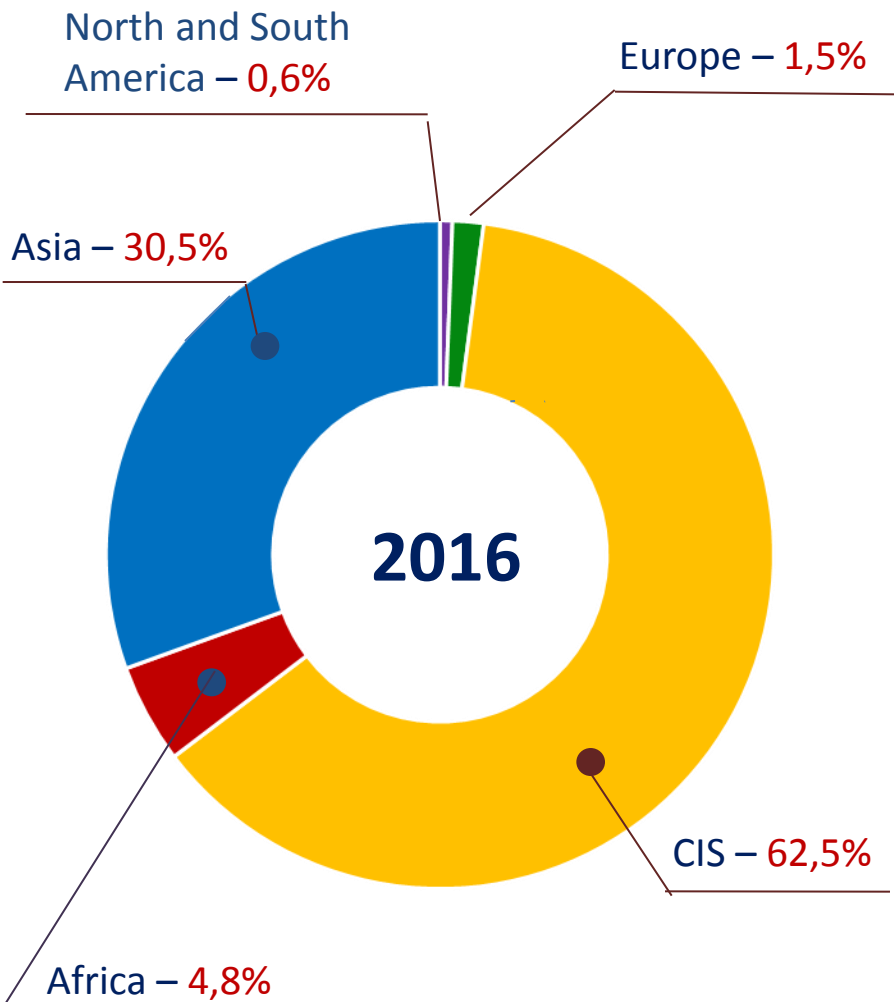
Higher education profiles:

- A Pedagogics.
- B Pedagogics. Vocational training
- C Art and design
- D Humanities
- E Communications. Economy. Management.
- G Natural sciences
- H Ecological sciences
- I Technics and technologies
- J Architecture and building
- K Rural and forestry
- L Public health services
- M Social defense
- N Physical training and tourism
- O Public catering.
- P Security service

Total HEIs - 52,
state - 43;
private - 9.

Total students - 336 373 people,
including:
studying full-time - 178 182,
studying part-time - 158 191,
undergraduates - 10 227,
foreign students - 17 938.

Number of foreign students



Foreign students: 19059 students from 98 countries:

	Turkmenistan - 8865		Kazakhstan - 682
	China - 1954		Nigeria - 608
	Russia - 1640		Azerbaijan - 523
	Iran - 930		Iraq - 389
	Tajikistan - 696		Lebanon - 316

- internships in the modern companies with the latest equipment (up to 20 weeks);
- presence of the branches of departments, base institutions, joint training, research and industrial laboratories, scientific and production complexes in industries for all higher education institutions;
- participation of international experts and representatives of employers in the development of education programmes;
- link between the learning outcomes and specific problem solutions (related to research or production);
- etc.



The structure of specialties of vocational education system

ОБЩЕГОСУДАРСТВЕННЫЙ КЛАССИФИКАТОР
РЕСПУБЛИКИ БЕЛАРУСЬ ОКРБ 011-2009

Специальности и квалификации
Спецыяльнасці і кваліфікацыі

Издание официальное

Министерство образования Республики Беларусь
ГУО «Республиканский институт высшей школы»

Минск

Higher education
II level - 332

Academic master's - 193

Practice-oriented
master's - 139

Higher education
I level - 386

Specialized secondary
education - 189

Technical and vocational
education - 105

Retraining - 392

At the higher education
level - 357

At the specialized
secondary education - 35



Commonwealth of Independent States (since 1991)



Azerbaijan



Kazakhstan



Russia



Uzbekistan



Armenia



Kyrgyzstan



Tajikistan



Ukraine



Belarus



Moldova



Turkmenistan



Eurasian Economic Community (2001 -2014)



Belarus



Kyrgyzstan



Tajikistan



Kazakhstan



Russia



Uzbekistan



Eurasian Economic Union (since 2014)



Armenia



Kazakhstan



Russia



Belarus



Kyrgyzstan



BELARUSIAN
STATE
UNIVERSITY

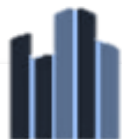
Belarus in the Bologna Process



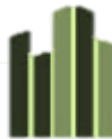
On May 15, 2015 the Republic of Belarus became the 48th member of the European Higher Education Area



Joint education institutions abroad



7 are functioning



2 are in the process of establishing





Academic mobility



Teachers

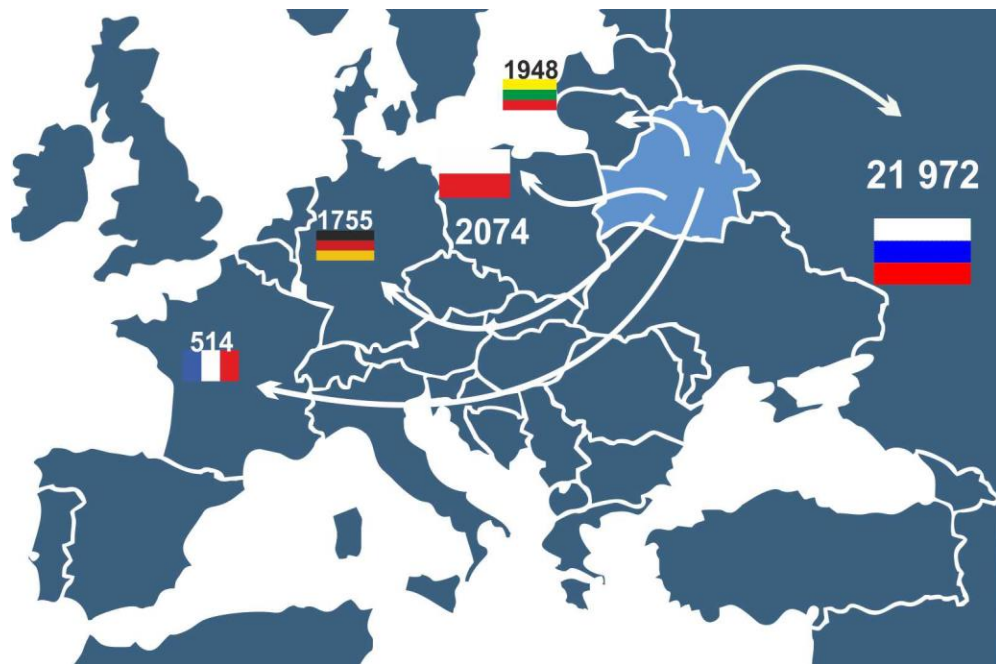
3 745



Students

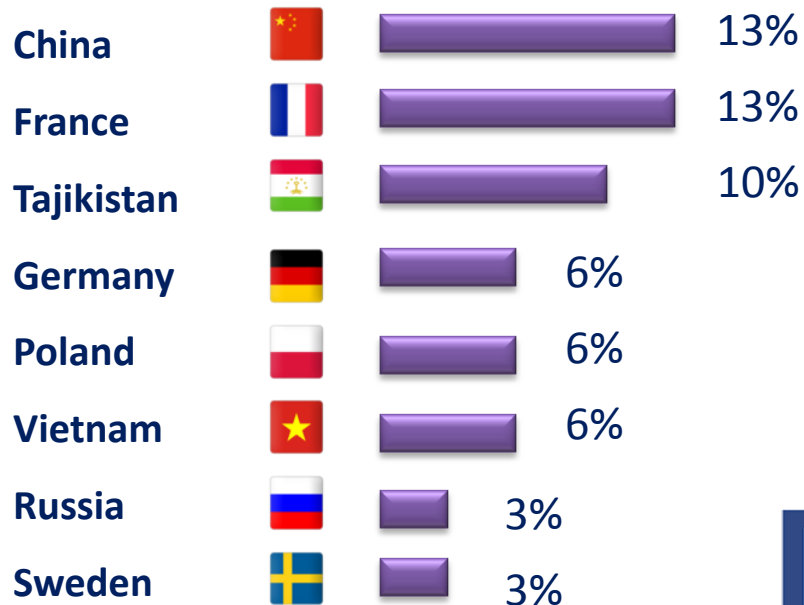
3 582

Countries in which Belarusian students receive education



Joint educational programmes – 25.

Partner countries:



DAAD

Deutscher Akademischer Austausch Dienst
Servicio Alemán de Intercambio Académico





International agreements on the mutual recognition of foreign credentials



Academic (for continuing education) and professional (for employment) recognition of foreign credentials is conducted by the Ministry of Education of the Republic of Belarus. Examination of foreign documents on education is provided by the Foreign Credentials Assessment Department (Belarus ENIC).

Foreign Credentials Assessment Department (Belarus ENIC)

220007 Minsk

Moskovskaya Str, 15-219

Fax: + 375 17 228 13 13

e-mail: mitskevich@nihe.by

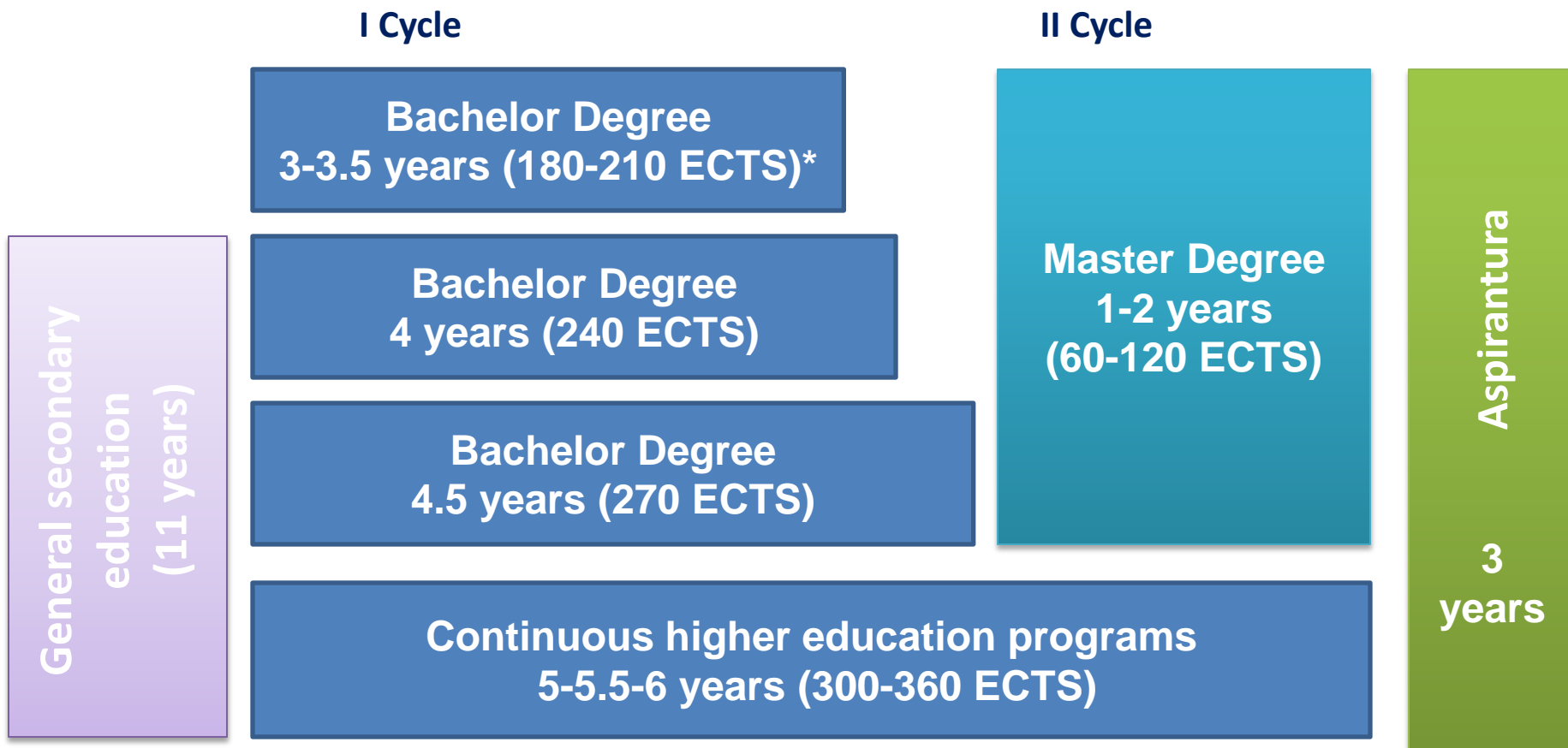
- Improving the quality of training. Improving the efficiency of practice-based training and strengthening relations with the contracting organizations;
- Improving the competitiveness of higher education in the world educational area;
- Improving the system of planning and optimizing the structure of training specialists with higher education;
- Optimizing the system of higher education institutions and improving management of the higher education system;
- Improving the material and technical, educational and laboratory resources of higher education institutions



Law of the Republic of Belarus "On amendments and addenda to the Education Code of the Republic of Belarus"



Optimizing the structure of Higher Education

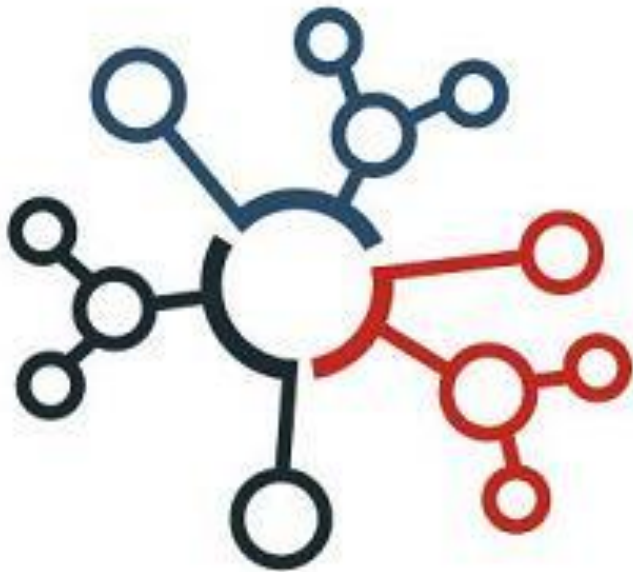


**The educational program of higher education, integrated with specialized secondary education*



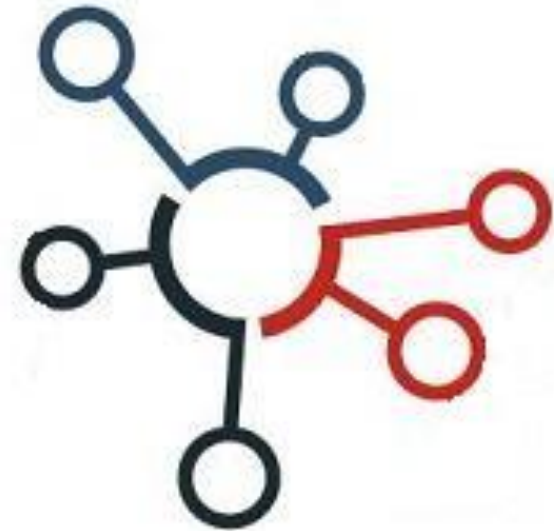
Clustering in the system of higher education

Educational Complex (CLUSTER)



- association of institutions of various levels of education: vocational, secondary specialized and higher education

Network System of Universities



- forming clusters of educational institutions of the same level based on the principle of specialization

Belarusian State University: in the country and in the world



BELARUSIAN
STATE
UNIVERSITY



BELARUSIAN
STATE
UNIVERSITY

BSU TODAY



БЕЛОРУССКИЙ
ГОСУДАРСТВЕННЫЙ
УНИВЕРСИТЕТ

www.bsu.by

The BSU is among **2%** of the best universities in the world and is included in more than 10 influential international rankings:

- **ARWU by Subject (Physics)**
- **THE (TIMES HIGHER EDUCATION)**
- **QS**
- **SCImago Institutions Rankings (SIR)**
- **Webometrics Ranking of World Universities (WRWU)**
- **U-Multirank**
- **RUR**
- **4icu**
- **URAP, etc.**



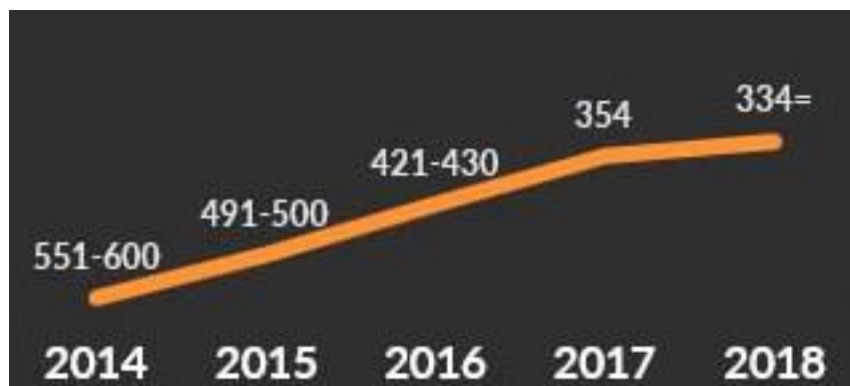
The BSU entered into the oldest and one of the most prestigious world rankings **ShanghaiRanking's Global Ranking of Academic Subjects 2017 – Physics** and took a place in the group **401-500**. This is the first time when a Belarusian university is ranked by the Shanghai ranking.

The ShanghaiRanking's Global Ranking of Academic Subjects contains university assessment in **52** subjects, including natural sciences and engineering, life sciences, medicine and social sciences. In total, more than 4,000 universities were evaluated in the study. The final version of the ranking included **1,409** universities, including **12 Russian universities and one Belarusian university**.





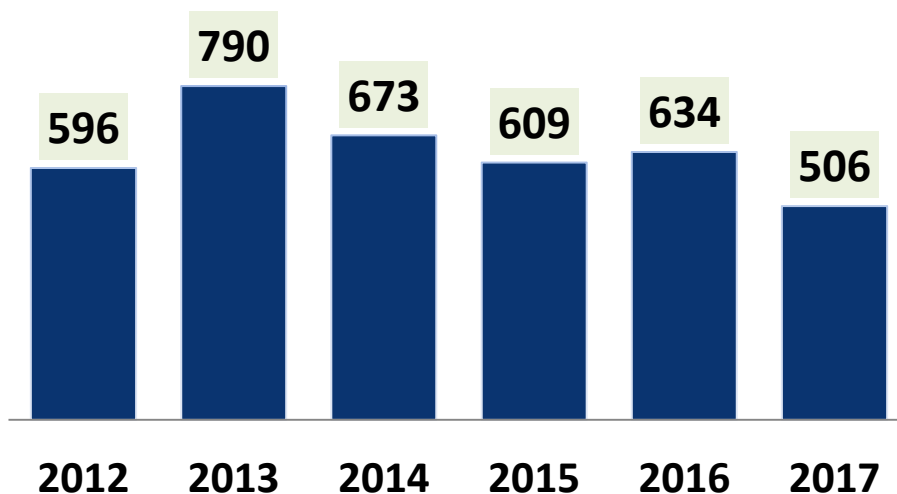
In June 2017
the BSU took the **334th** position
in the latest edition
of **World University Rankings 2017/18**
released by the **British agency QS**.



In 2015 the QS Agency entitled the BSU to use the **ranking logo** to emphasize high international reputation of the university on its website and in print media.

According to the last edition of the excellence rating
of **Webometrics Ranking of World Universities** BSU
reached **506th** place.

(2% of the 30,000 universities existing in the world)



BSU today is a united powerful educational, scientific and production complex:

26 faculties and educational institutions

10 research and production institutes and centers

41 faculty research laboratories

10 innovation production enterprises

30 legal entities



Founded on October 30th, 1921



In 2015 Belarus joined
the Bologna process



BSU Quality Management System is
certificated according to
the requirements of STB ISO – 9001

- Pre-University Education
- Mathematics and Mechanics
- Applied Mathematics and Computer Science
- Radiophysics and Computer Technologies
- Physics
- Geography
- Chemistry
- Biology
- History
- Ecology
- Philosophy and Social Sciences
- Sociocultural Communications
- Business and Technology Management
- Management and Social Technologies
- International Relations
- Economics
- Philology
- Theology
- Law
- Military
- Journalism

**29,000 students and graduate students
(academic year 2016-2017)**

**There are more than 30 specialties
of postgraduate courses that
are available to obtain in English.**





BSU Staff

Total	8,800
Teaching staff	3,650
Scientific manpower	520
Doctors of Science	410
Candidates of Science (PhD)	1,940
Associate Members of NASB	13
Academicians of NASB	12



- More than 100 buildings
- 3 campuses
- 10 dormitories
- 4 media classrooms
- University Network Resources
- Fundamental Library
- 3 sport complexes with swimming pools





Research and Innovations at the Belarusian State University

BSU complex includes:

- ❖ educational
- ❖ scientific and research
- ❖ production units



Fundamental
Research



Applied
Research



Management
and
Production



Sale
and
Promotion

Science and Innovation chain



- ***26 faculties and educational institutes***
- ***4 research institutes***
- ***2 national research centers***
- ***42 research laboratories at faculties***
- ***5 unitary enterprises***

University clusters by directions:

- ▶ *chemical materials and technologies*
- ▶ *development of educational and scientific equipment*
- ▶ *radio physics and production of measuring devices*
- ▶ *informational technologies*

Hardware software complexes, equipment and devices

- Automated complexes
- Controlling and measuring devices
- Medical equipment
- Electronic components and devices
- Educational devices, equipment and complexes

Equipment and instruments

- Technological equipment
- Instruments

Substances and Materials

- Engineering and manufacturing
- Agricultural
- Medical

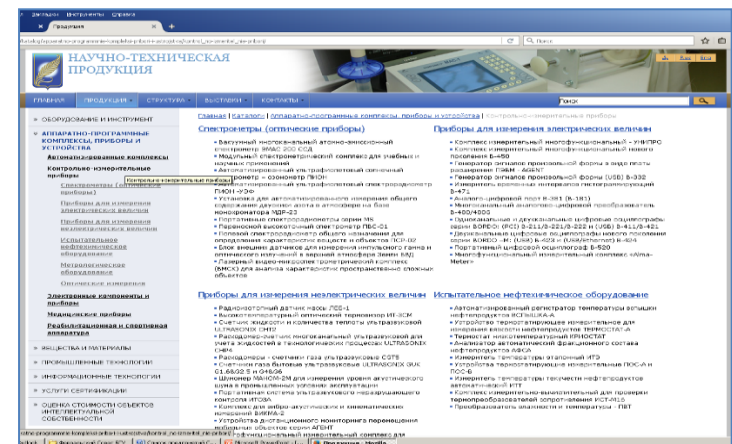
**WWW.PRODUCT.BSU.BY
WWW.BSUPRODUCT.BY**

Industrial technologies

- Application of coatings
- Production of medical dosage forms
- Biotechnologies
- Chemistry and petro chemistry
- Agriculture
- Power engineering and fuel

Informational technologies

- Science
- Education
- Management



In 2016 the BSU complex sold **science intensive R&D products to costumers of the Republic of Belarus** to the amount of **\$ 6,735.600 US**, **scientific services** to the amount of **\$ 5,554.900 US**

The University will continue to increase its influence on the development of the key branches of the economy of our country, including:

- ❖ *nano- and biotechnical sector*
- ❖ *pharmaceutical and chemical industry*
- ❖ *public health*
- ❖ *instrument engineering*
- ❖ *agriculture, etc.*



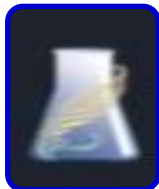
In 2008-2016 R&D products of the BSU have been exported in 39 countries of the world



Partner countries in 2016

- | | |
|-------------------------|-------------------------|
| 1. <i>Belgium</i> | 7. <i>Kazakhstan</i> |
| 2. <i>Bulgaria</i> | 8. <i>Korea</i> |
| 3. <i>China</i> | 9. <i>Poland</i> |
| 4. <i>Germany</i> | 10. <i>Russia</i> |
| 5. <i>Great Britain</i> | 11. <i>Turkmenistan</i> |
| 6. <i>Indonesia</i> | 12. <i>USA</i> |

Export dynamics				
Year	2013	2014	2015	2016
Number of contracts	73	82	78	92
Number of countries	13	12	10	12
Amount, USD	1,891.000	2,239.500	2,132.500	3,021.600



Chemical Faculty



**Research Institute of Physical and Chemical
Problems**



Production Enterprises:

- “Unidragmet BSU”
- “Unitehprom BSU”

- **32 technologies and methods of processing of secondary raw materials for extraction of precious metals** were developed by the scientists of the Chemical Faculty of the BSU, the Research Institute of Physical and Chemical Problems and UE “Unidragmet BSU”.
- **320** items of industrial and technological equipment.
- Allow to process more than **20** basic types of scrap and waste on its own production plant.



State laboratory of assay analysis accredited in accordance with STB ISO MEK 17025 for the use of 28 certified measuring methods of their own design and 4 GOSTs.

More than 4,5 thousand chemical and physicochemical analyzes are performed annually.

Pharmaceutical products are developed by the full innovative cycle, from the formulation of the technical task to serial production jointly by the Research Institute of Physical and Chemical Problems and UE “Unitehprom BSU”. Medicinal substances and preparations that were produced in 2016 made up the amount of \$235,600 US.



In 2016, UE “Unidragmet BSU” developed the manufacture of pharmaceutical substances based on coordination compounds of platinum.

In 2016, UE “Unidragmet BSU” produced 0.18 kg of cisplatin and 0.1565 kg of oxaliplatin.

The products are delivered to the UE “Unitehprom BSU” for production of finished dosage forms.



Faculty of Radio physics and Computer Technologies is engaged in production of a number of measuring devices, that are produced at the UE “Unitehprom BSU”.



Faculty of Radio physics
and Computer
Technologies



UE “Unitehprom”

Service of information-measuring systems of the UE “Unitehprom BSU”

- ❖ Computer-oriented measuring instruments for a wide range of purposes (oscilloscopes, generators, ADCs, DACs, etc.).
- ❖ Industrial measuring instruments (sound level meters, vibroacoustic analyzers, strain gauges, pressure and temperature gauges, etc.).
- ❖ Equipment for satellite systems of transport monitoring.
- ❖ Automated measuring complexes for testing and metrological services of enterprises.
- ❖ Custom-made control and measuring, monitoring systems for various purposes (analog and digital electronics, software).





Physical Faculty



UE “Activ BSU”

Type of equipment	Quantity oa the equipment sold, number of sets				
	2012	2013	2014	2015	2016
Equipment for general educational institutions (tenders)	988	17,316	18,260	11,620	1,950
Equipment for district departments of education, sport and tourism under separate contracts	949	1,554	201	207	267
Laboratory equipment for Higher Education Institutions	259	9	6	60	–



**Research Institute of
Applied Problems of
Mathematics and
Informatics**



**Faculty of Applied
Mathematics and
Informatics**

Software Development

- Formation of thesis topics, students' practical training, execution of master's, diploma and coursework are carried out **on the basis of the real themes of the Institute.**
- **Cooperation** with the companies of the High Technologies Park, National Bank of the Republic of Belarus, the institutes of the National Academy of Sciences of Belarus, and branch research institutes: RI of Technical Information Protection, N.N.Alexandrov National Cancer Centre of Belarus.

Research Institute of Applied Problems of Mathematics and Informatics is engaged in:

- **establishment and development of new educational specialties and specializations at the Faculty of Applied Mathematics and Informatics** in urgent areas being developed in the Research Institute:
“Economic Cybernetics”, “Computer Security”, “Applied Cryptography”, “Econometric Modelling, Analysis and Forecasting”, “Mathematical Methods of Information Protection”
- **conducting training** on special subjects



Aim of the Center

Development of the students' innovative potential to form a willingness to generate new ideas, create and implement innovative developments in production and social sphere

Tasks of the Center



information and methodical support of innovative youth ideas and projects



promotion of increase of personal entrepreneurial effectiveness and motivation of students to ensure growth of business activity



creation of conditions for implementation of joint initiatives and the development of interdisciplinary relations between Higher Education Institutions, research institutes, foundations and other organizations and business structures

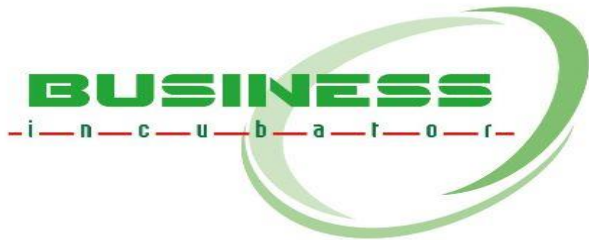
“School of Entrepreneurship and Management for Youth. Your own business” for students and young specialists.

Mission of the Center is to conduct research aimed at revealing the role of youth in the innovative development of the Belarusian society, practical implementation of research results, implementation of paid educational services that contribute to meeting the public and individual needs of the individual.



Aim:

support of students, undergraduates, graduate students and employees in creation and development of new successful businesses that are based on research and development.



Financing:

1. Grants (including international ones).
2. Targeted financing within the framework of the program for support of the entrepreneurship development.
3. Targeted financing as a part of the Student Initiative Support Program.
4. Extrabudgetary funds of the BSU.
5. Sponsorship and charitable contributions.

Main tasks:



Selection of small businesses entities for allocation in the business incubator



Rendering of educational, marketing, consulting and other organizational-administrative services to small business entities

It is assumed that a distributed-type technopark will be established on the basis of the UE “Unitehprom BSU”

Areas of scientific and technical activities for the formation period:



Chemical and pharmaceutical industry

- ✓ development and manufacturing of new import-substituting medications and preparations



Instrument engineering

- ✓ development and manufacturing of new import-substituting devices for continuous monitoring of high-temperature technological processes, instruments for measuring, testing and navigation



Biological and food industry

- ✓ development, research, introduction into manufacturing, production of food additives for bakery, macaroni, meat and fish products

Specialization of the BSU Technopark



***Power efficiency and
energy saving***



***Ecology and rational
nature management***



***Radio electronics and
space technologies***



***Electronics and
photonics***



***Medicine and
Pharmaceutics***



***Systems and
complexes of equipment***



Biotechnologies



***Agriculture and
food industry***

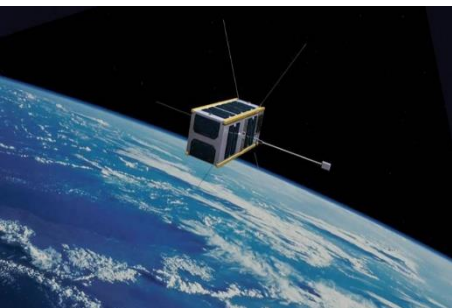
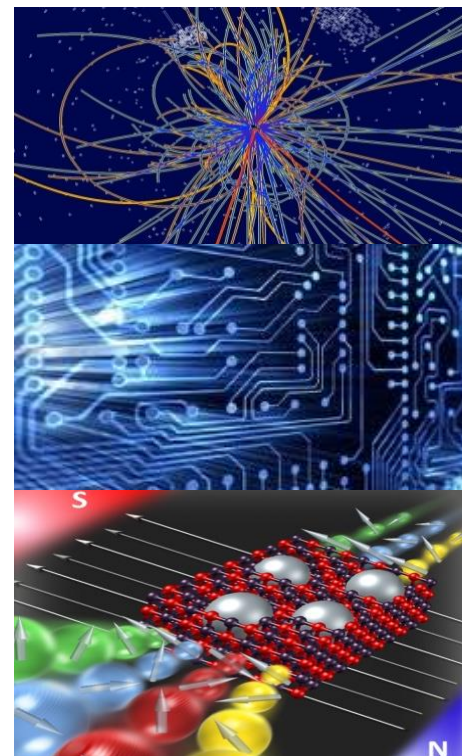


***Multifunctional materials
and technologies***



***information and
communication technology***

- Nanostructures and nanotechnologies
- Laser technologies
- Space research
- Elementary particles and high-energy physics
- Theory of differential and integral equations
- Mathematical modeling of complex systems
- New materials and technologies
- Biotechnologies and genetic engineering
- Concept of macroeconomic stabilization in Belarus
- Juvenile justice
- Development of the National Atlas of Belarus



Hardware-software complexes, devices and equipment

- Hardware-software complexes
- Control instrumentation
- Medical devices
- High-end devices and integrated circuits
- Training devices, equipment, systems

Equipment and instrument

- Technical equipment

Substances and materials

- Industrial and agricultural substances
- Protective substances and materials
- Medical substances and biopreparations

Industrial technologies

- Biotechnologies and chemical technologies
- Fuel and energetics

Information technologies

- Information high-end technologies
- Information training technologies



**More than 1,000
items altogether**

www.product.bsu.by

- geoinformational technologies in geomechanics and geodynamics
- information technology and computer graphics
- applied probability analysis
- biophysics and biotechnologies
- cell engineering and nanobiotechnologies
- bioanalytic systems
- dielectric spectroscopy of heterogenous systems
- nonlinear optics and spectroscopy
- power efficient materials and technologies
- semiconductors spectroscopy
- physics of electronic materials
- physics and instruments of semiconductors
- high-energy ionic implantation and functional diagnostics
- spectroscopic systems
- physics of ion-plasma modification of rigid bodies
- scientific instrument engineering
- materials and instrument structures of micro- and nano-electronics
- information-measuring system
- applied space technologies
- laser systems
- Belarusian folklore
- information processing methods

- information systems
- instrymantal-analytical technologies
- Inorganic and general chemistry
- chemical-analytical systems
- hetero-organic syntheses
- radiochemistry
- physical chemistry of condensed medium
- applied problems of toxicity combustion products
- assay tests
- molecular genetics and biotechnology
- phyto genetics
- molecular genetics and biotechnologies of microorganisms
- human molecular genetic
- physiology
- physiology and biotechnology of plants
- metabolic biochemistry
- biochemistry and pharmacology of bioactive substances
- applied problems of biochemistry
- biotechnology
- transgenic plants
- hydroecology
- landscape ecology
- limnology



International Cooperation of the Belarusian State University

About 400 cooperation treaties with
universities from 54 countries of the world





International Cooperation



- ✓ Around **400** cooperation treaties with universities from **54** different countries.
- ✓ **1,000** employees and **700** students are sent on academic missions abroad annually.
- ✓ Over **40** international projects.
- ✓ **12** joint programs with foreign universities.
- ✓ Membership in **7** International University Associations.
- ✓ **4** international centers in BSU.

Annually:

- more than **1000** staff members are sent abroad for study and research visits
- about **700** students are sent abroad for study and participation in conferences
- about **100** incoming and **250** outgoing exchange students

Top 7 countries outgoing mobility

1. Russia
2. Germany
3. Poland
4. China
5. Czech
6. Italy
7. France

Top 7 countries incoming mobility

1. Russia
2. Germany
3. Poland
4. Ukraine
5. China
6. Lithuania
7. Italy



BSU actively participates in a number of the international projects



Erasmus+

DAAD

Deutscher Akademischer Austausch Dienst
German Academic Exchange Service



**Youth
in Action**

In 2016, there were 17 educational projects involving BSU. Among them:

5 TEMPUS projects,

5 Erasmus-Mundus projects,

4 Erasmus+ projects

The program of Jean Monet,

DAAD,

UNFPA,

Visegrad Fund,

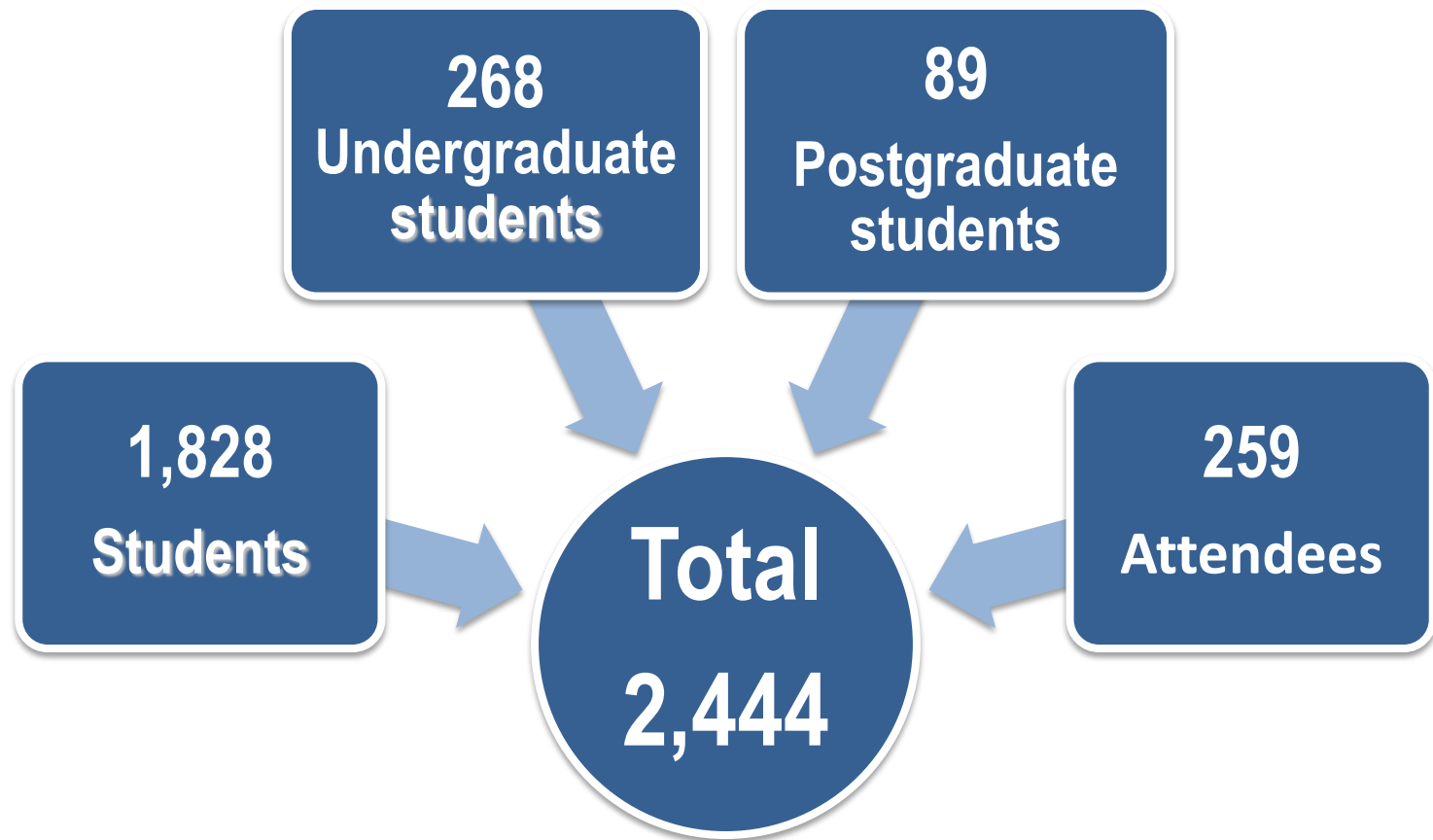
Information point of the Council of Europe.



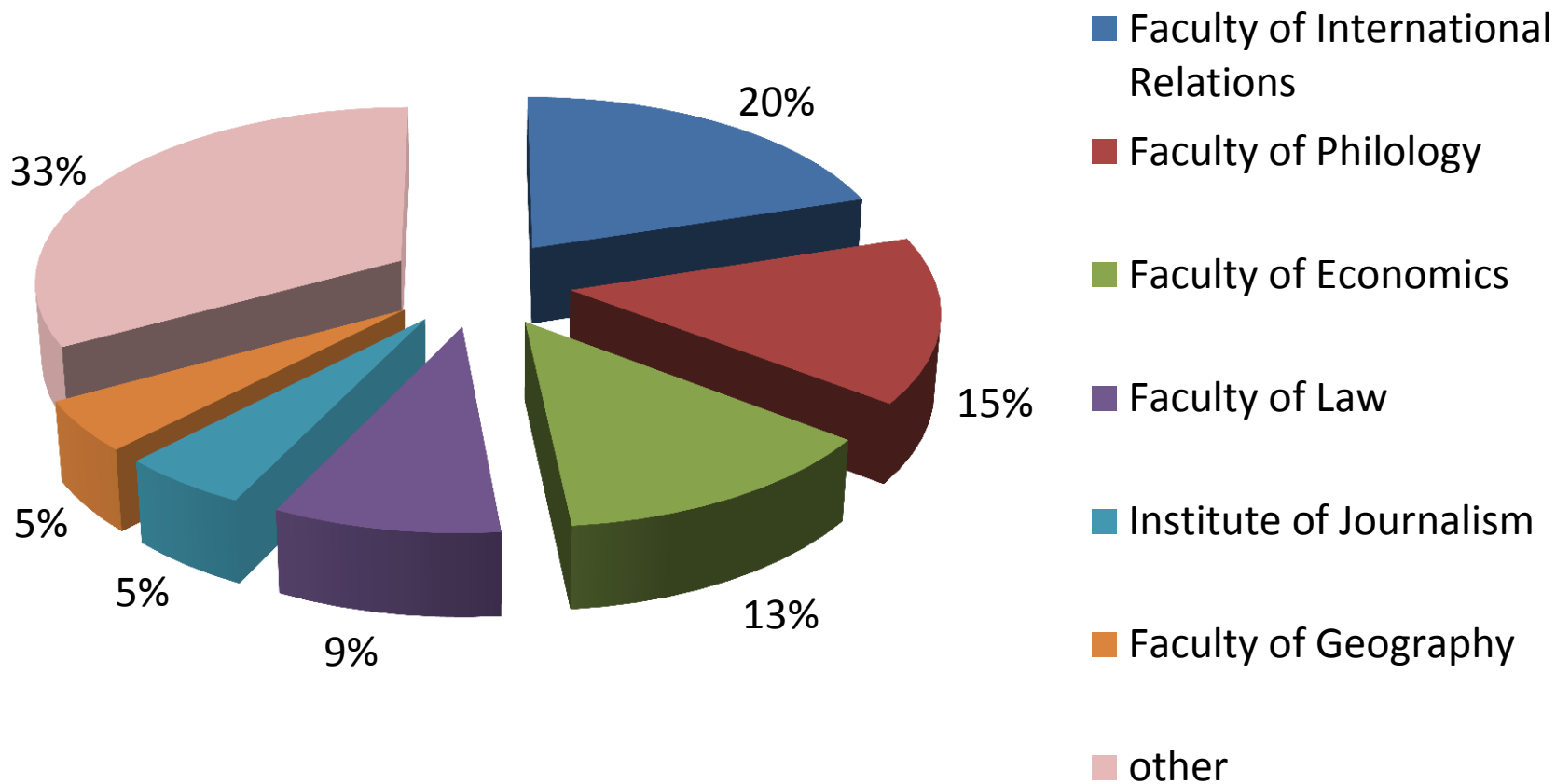
European Commission
TAIEX



International students 2016/2017

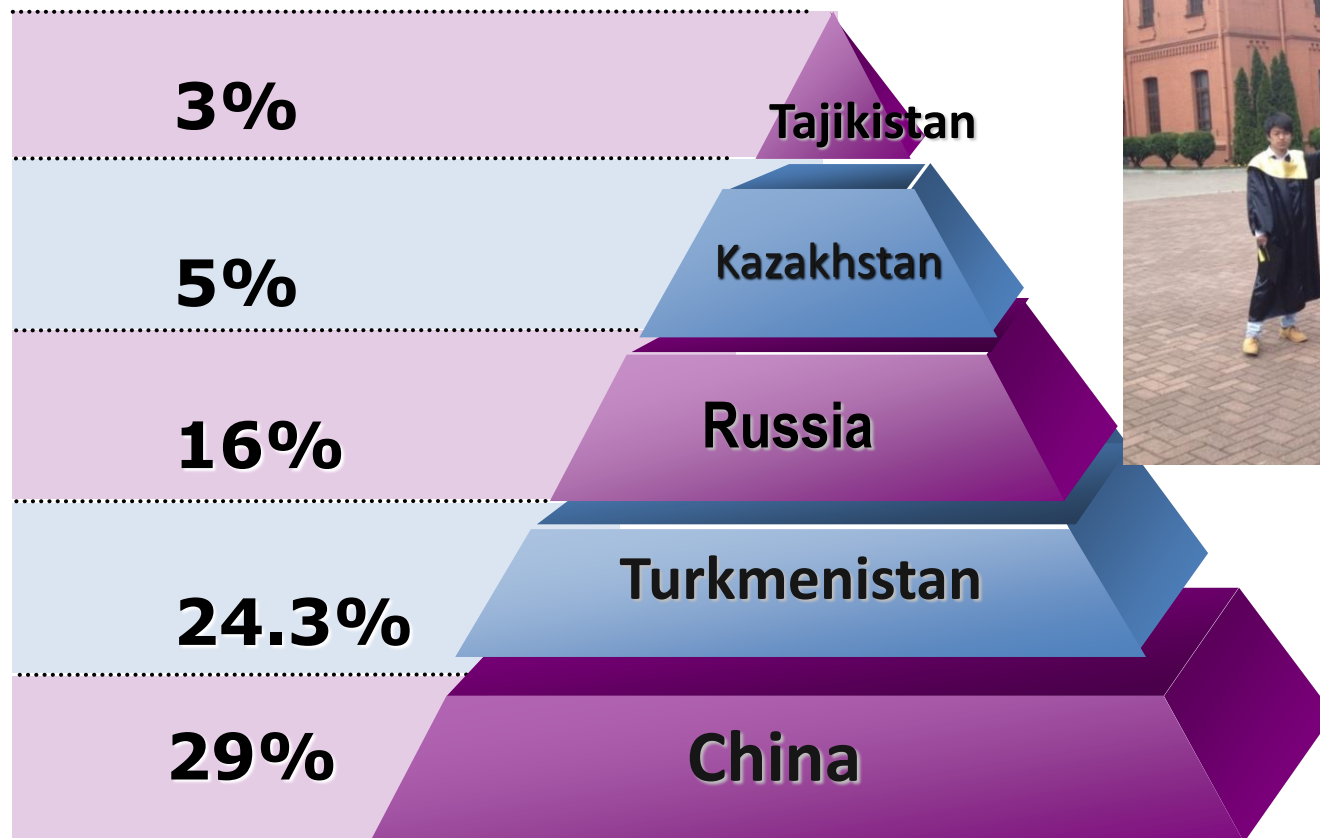


Percentage of foreign students at different faculties in 2016-2017



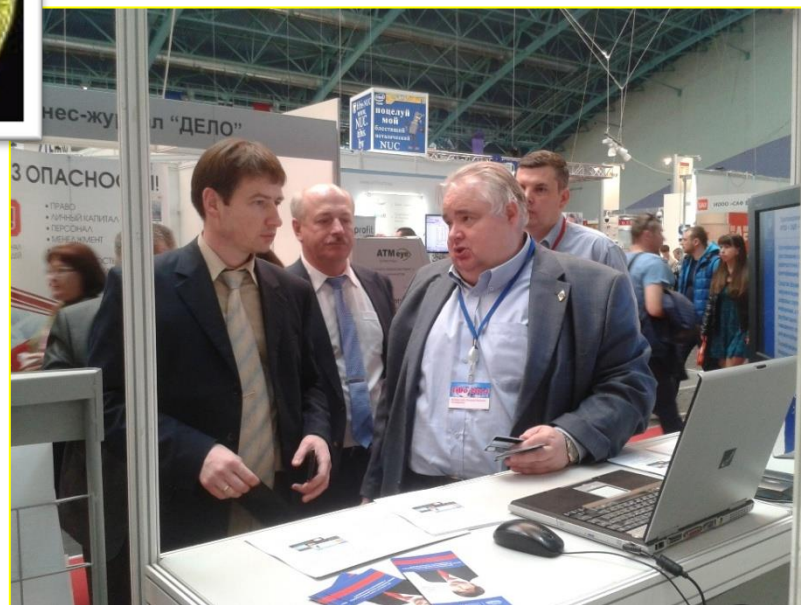
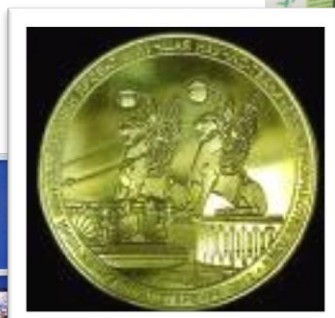


The key share of export of BSU education services in 2016-2017



In the BSU there
are foreign citizens
from **56** countries
of the world.

In Belarus, Bulgaria, China, Germany, Georgia, Italy, Japan, Kazakhstan, Russia, Serbia, Slovakia, Spain, Vietnam, United Arab Emirates, etc.





BELARUSIAN
STATE
UNIVERSITY

BSU innovation awards on forums and exhibitions





BELARUSIAN
STATE
UNIVERSITY

International conferences

Annually, the University hosts more than 90 international conferences, seminars and symposiums





**Innovative
teaching & learning
at the Belarusian State
University**

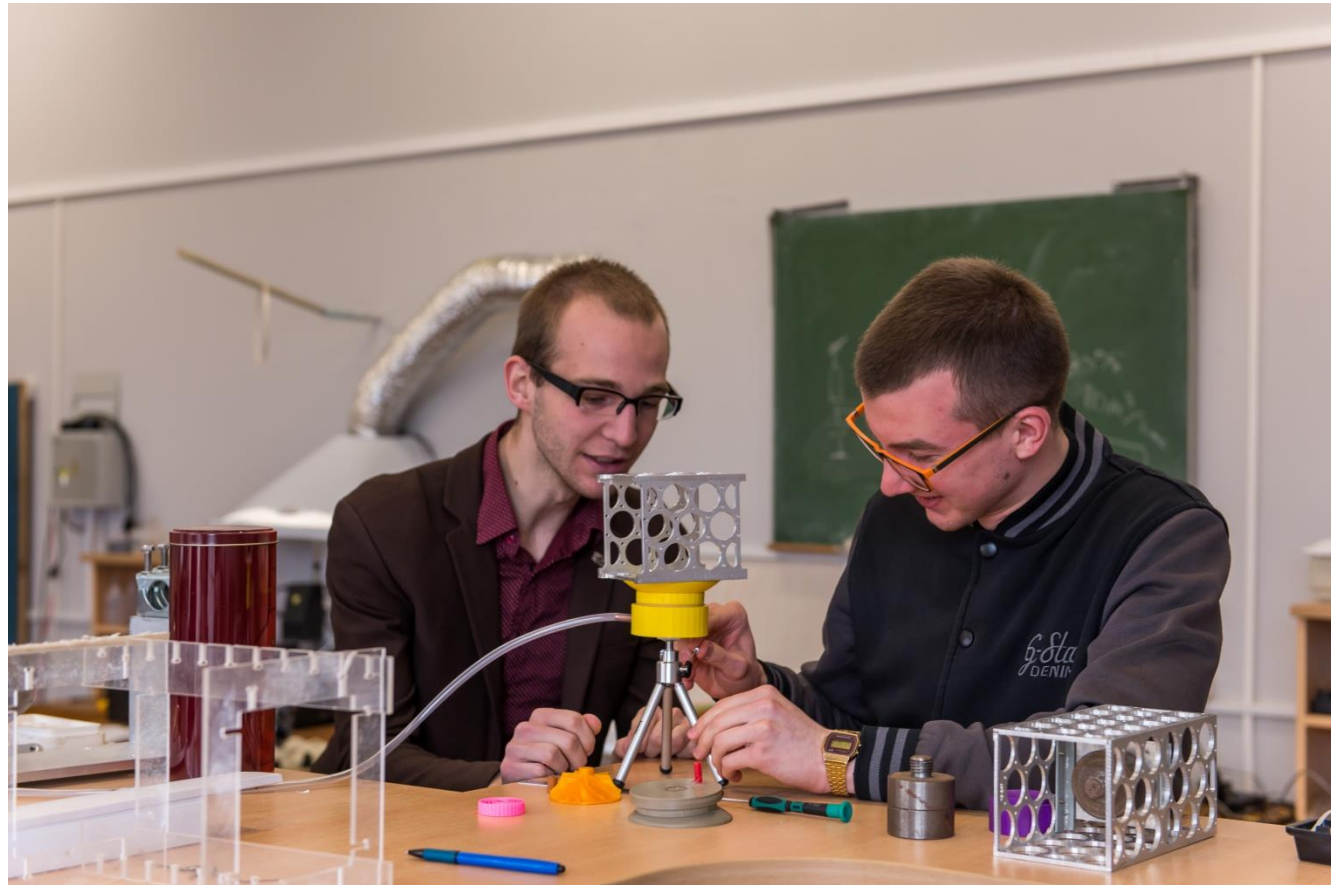
Belarusian State University conducts practice oriented teaching in major spheres including Nuclear Physics and Technologies.

A working Lab-model of Nuclear Power Plant is installed at the Faculty of Physics.



Belarusian State University is actively developing its first students' satellite to be launched into space in partnership with China.

The satellite is developed by students within the frameworks of their study process.








Образовательные онлайн-ресурсы БГУ



Для создания новых курсов обращайтесь к администратору портала образовательных онлайн-ресурсов:
Галынский Владимир Михайлович,
тел.: 209-54-33
email: galynsky@bsu.by


 Заочная программа повышения квалификации «Использование технологий «смешанного» обучения при разработке электронных учебных курсов (на основе LMS Moodle)»

 Методический семинар «Методическая работа преподавателя – 2017». Дополнительную информацию можно узнать по адресу: hubarevich@bsu.by

 С действующим Положением об образовательных онлайн-ресурсах БГУ можно ознакомиться на сайте БГУ в разделе Образование / Информация для профессорско-преподавательского состава

Информация для преподавателей


- Положение об образовательных онлайн-ресурсах
- Раздел портала для преподавателей БГУ
- База данных «Учебные программы БГУ»

 Как создать собственный онлайн-ресурс за 3 недели

Дистанционные школы БГУ

- [Дистанционная математическая школа механико-математического факультета](#)
- [Дистанционная школа юных историков](#)

Психологическое тестирование

 Психологическое тестирование студентов младших курсов

Образовательные ресурсы факультетов

- Механико-математический факультет
- Физический факультет
- Факультет радиофизики и компьютерных технологий
- Географический факультет
- Биологический факультет
- Исторический факультет
- Филологический факультет
- Экономический факультет
- Факультет прикладной математики и информатики
- Факультет философии и социальных наук
- Химический факультет
- Институт журналистики
- Факультет международных отношений
- Юридический факультет
- Факультет социокультурных коммуникаций
- Факультет доуниверситетского образования
- Общеуниверситетские кафедры

Календарь

September 2017						
Пн	Вт	Ср	Чт	Пт	Сб	Вс
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

The portal of
Online educational resources
of the Belarusian State
University – a collection of
hundreds of online courses for
students in major disciplines.

www.dl.bsu.by

Online Lectures,
Webinars and
VideoPodcasts
as everyday
teaching and
learning
technologies

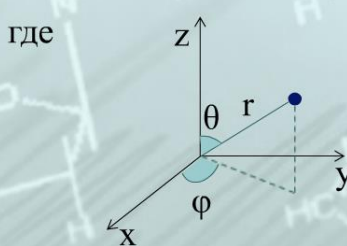
1. Волновая функция

Примеры

3. Волновая функция атома водорода (2p)

$$\Psi_{2p} = \frac{1}{4\sqrt{2\pi}} \left(\frac{1}{a_0} \right)^{\frac{5}{2}} r \cdot e^{-\frac{r}{2a_0}} \cdot \sin \theta \cdot e^{i\varphi}$$

где



5 / 34 00:00 / 00:00

НАЗАД ДАЛЕЕ

СЛАЙДЫ

Поиск...

1. ...
2. ...
3. ...
4. ...
5. ...
6. ...
7. ...
8. ...
9. ...
10. ...
11. ...



Augmented Reality applications add more dynamic content to traditional forms of education and media.





Поиск



young_phys

Подписаться

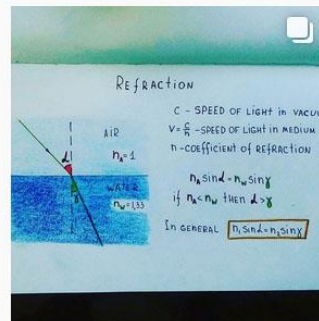
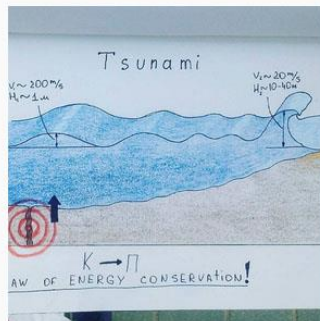
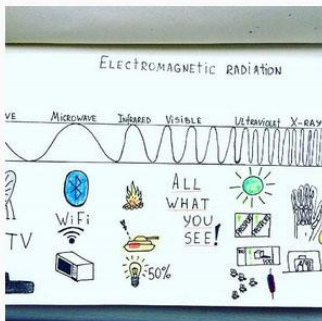
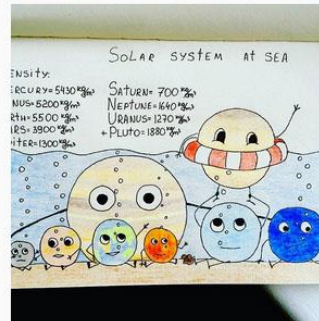
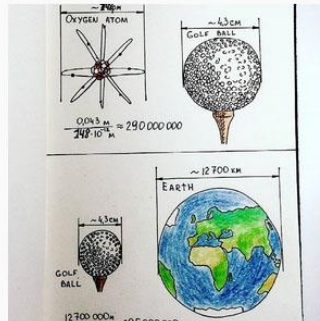
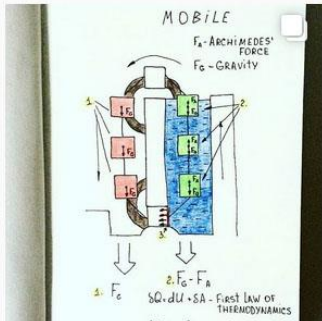


35 публикаций

1 665 подписчиков

Подписки: 1 462

phys.for.all The phenomena of nature and ordinary things from the point of view of physics. Physics can be interesting and not complicated!



“Physics for all” – a new Instagram project at the Faculty of Physics of the BSU



BELARUSIAN
STATE
UNIVERSITY

Thank you for attention!

We are always open for cooperation!

www.bsu.by