

## ANNUAL REPORT FSFEI HE "VORONEZH STATE UNIVERSITY" 2016

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Voronezh VSU Publishing House 2017







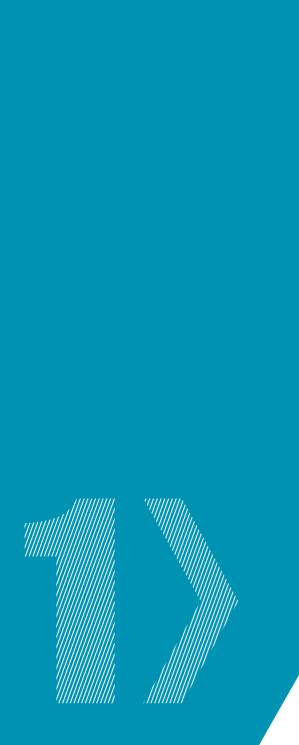
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## **RECTOR'S ADDRESS**



**D.A. Endovitsky,** Rector of Voronezh State University

## **RECTOR'S ADDRESS**

For the many thousand employees of our university and all the higher educational institutions of the country in general, 2016 was a year of hard work aimed at consolidating achievements and continuing the selected "lines of development" in all the areas of the university's multifaceted activities, which include education, research, innovation, training, raising cultural awareness, and international relations.

We have experienced the full burden of the economic crisis that the country is going through. For us, it resulted in a lack of financing of certain activities; additionally, we have had to put a number of programmes on the back burner and optimize the organizational structure of university management, including the educational support personnel and managerial staff. Naturally, this is always a painful process. Yet, not only did we come out of it, but we were also able to advance, enrich our experience of overcoming difficulties, interacting and collaborating with governmental organizations, NGOs, and business entities.

Here is where our staff demonstrated true civic patriotism, coming out of a desire and readiness to act for the love of the country, and the university in particular, as well as contributing to their strength and development. I am convinced that this patriotic approach will continue to unite us all, helping us to overcome difficulties and keep moving forward.

In 2016, we strengthened our leadership position in the educational, scientific, and cultural community of the Central Black Earth Region. I consider this fact to be our joint achievement, but it still requires further effort from the whole of the university's organizational structure.

In addition to what has been mentioned above, I must say that we constantly checked ourselves against the criteria of the top national and international rankings, such as Quacquarelli Symonds (QS), Times Higher Education (THE), Round University Ranking (RUR), UI Green Metrics World University Ranking, etc. Not only were we able to keep our positions therein, but we also progressed to even higher levels of achievement. Our university took an active part in developing the methodology of the Moscow International University Ranking ("The Three Missions").



Alongside the positive evaluation of the university's reputation, in the reporting year we received praise from the governor of the Voronezh region Alexey Gordeev, Deputy Chairperson of the Council of the Federation Galina Karelova, the new Minister of Education and Science of the Russian Federation Olga Vasilyeva, as well as a number of heads of Russian and international universities and prominent entrepreneurs.

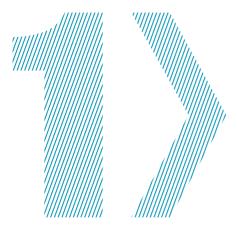
Another important achievement was the status of "The Best Innovative University of the Voronezh Region – 2016" that VSU won for the second consecutive year. Furthermore, it was the third time that our students won the National Cup and become the best student team in the country at the All-Russian Student Marathon in the city of Tuapse.

Our efforts in 2016 also focused strongly on implementing the joint large-scale project of preparing for the one hundredth anniversary of our university. Its motto was "VSU for the city and the country". During the year, we managed to address a number of essential organizational issues, as well as implement several projects which demonstrated the role of our university and its contribution to the social, economic, and cultural life of the region. Our experience has confirmed that the chosen path of preparing for VSU's anniversary is the right one. There is no doubt that 2017 is going to be yet another step on the way to the festive celebration of the centennial.

Summing up the results of 2016 and determining the tasks for the year that we are currently living and working through, I consider it my duty to draw your attention to the Presidential Address to the Federal Assembly made by Vladimir Putin on 1 December 2016. This document not only analyses the way the country and society have come during the year, but also defines the strategy aimed at uniting our efforts. Significant emphasis is placed on the issues relating to education and training. And this is where we come in.

The materials of the Annual Report are presented below in order to give the wider circle of the university's stakeholders the opportunity to get a clear picture of what has been done, analyse their participation in the joint work, help figure out which reserves are yet to be involved, and define the general and specific goals that we need to meet in the future. Any advice, suggestions, and critical remarks will be accepted with gratitude and considered carefully and in detail. I believe this document, though rather lengthy, is not to be looked through briefly and put on a shelf. What it contains is our experience, our reserves of efficiency growth, and the lines of future development, which is why it can be used as a basis for analysing our current activities, and to determine the possible solutions to the problems we face in view of any possible difficulties and risks.





## KEY FACTORS SHAPING THE DEVELOPMENT OF VORONEZH STATE UNIVERSITY IN 2016

The driving factors for the work of the university staff in 2016 were selected in accordance with:

- public policy in the area of education and science, which had been defined by President of the Russian Federation Vladimir Putin, as well as the orders of the Russian government, and the regulations of the Ministry of Education and Science of the Russian Federation;
- the goals set by Governor and government of the Voronezh region, aimed at further increasing VSU's role in the social, economic, and cultural life of the region;
- the appointment of a new Minister of Education and Science of the Russian Federation Olga Vasilyeva, which meant new adjustments in the direction of the development of higher education;
- a need to take into account the negative trends of the economic crisis and to resist them;
- understanding the collective and personal responsibility for sustaining an appropriate level and enhancing the quality of specialist training, research effectiveness, the university's competitive ability, educating the youth, and preserving the atmosphere of rectitude and spirituality;
- consolidating the university's position in its cooperation and collaboration with universities on the interregional and international level;
- organizing the election of the VSU rector, which enabled us to analyse our work over the last five years, identify the reserves, and determine the tasks for the upcoming period;
- outlining the work on the preparation for VSU's centennial.

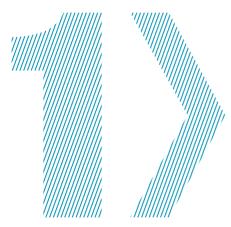
All the abovementioned and other factors found their reflection in the practical activities of both the Rector's office and all the other structural subdivisions of the university, and they have enabled us to make the necessary adjustments to the current and future plans of action.



## **VSU OBJECTIVES FOR 2017**

- At her meeting with the entrepreneurs at the Chamber of Commerce and Industry at the beginning of 2017, Minister of Education and Science of the Russian Federation Olga Vasilyeva stressed that there are three major tasks facing those involved in the system of higher education today: availability, practicability, and quality. This is what all the university staff need to work on in 2017, consistently and patiently. The specific directions of activity are described in detail in the sections of the present report. Here, we aim to give a general overview of the tasks, in order for those who are going to work on achieving them to base their actions on a unified goal and a deep understanding of their role therein.
- Like last year, we are going to have to continue our purpose-driven efforts aimed at countering negative recessionary tendencies in order to maintain the positions achieved so far, as well as to keep our university's "line of development" and ensure the implementation of the university's strategic plan and projects assigned to each of the Vice Rectors.
- Another relevant task is increasing the effectiveness of research (with an emphasis on its innovative component) through maintaining collaboration and partnership with enterprises, organizations, business communities, and universities.
- There is a need to raise to a whole new level the implementation of innovative forms for the education programme, including making active practical use of Massive Open Online Courses, developing the Electronic University project, introducing a network of joint educational programmes in collaboration with leading Russian and international universities, and developing lecture courses and master's degree programmes in foreign languages.





- Particularly significant emphasis must be placed on working with gifted children. This wide goal involves a number of specific events associated with the Experimental Technical School for Children, the School Scientific Society, VSU's participation in the work of the Kvantorum children's technopark, as well as VSU's collaboration with the Solnyshko school for gifted children (Repnoye), which is to be brought under the intellectual patronage of VSU.
- Another task of great strategical importance is strengthening the medical and military components of the research and educational framework of the university. At the same time, we will pay very close attention to developing liberal arts education and research. Our unique competitive advantage is a complete lack of any conflict of interests between the arts and sciences. These two key components are to be further transformed into a well-balanced triad, alongside an equally relevant engineering and technical segment (in geology, IT, the technologies of biochemical and biological processes, and setting up modern engineering centres).
- We must continue the trend of enhancing student social development in all its entirety, including patriotic, professional, spiritual, moral, and cultural development. It has to be based on research and a built-in view of the country's, the society's, and the individual's interests, and it must make use of the students' initiative, supporting them in every possible way, and counteracting terrorist and extremist ideologies.
- Like in the previous year, we need to consolidate and develop international cooperation and collaboration among universities and colleges, building upon the practice of academic double degree programmes with the leading international partner universities, increasing our involvement in the work of Russian Language Centres abroad, in EU projects, and in the work of the Council of Rectors of the Voronezh region and the Association of Higher Education Institutions of the Central Black Earth Region.

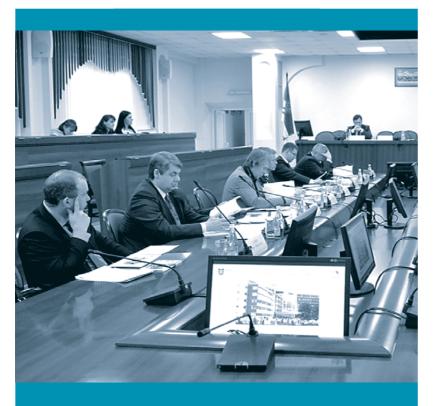


- The Rector's office and the actively participating university subdivisions and public organizations consider it an essential objective for the following year to preserve the social component of our activities: providing social support for long-service employees, all categories of staff, postgraduate and undergraduate students, as well as ensuring favourable conditions for their work and rest. The university administration will continue working on developing incentive schemes for the lecturers, staff members, undergraduate and postgraduate students; awarding their specific achievements and, at the same time, enhancing classroom and workplace discipline and encouraging the sense of personal responsibility for the task at hand.
- Considering the fact that the Ministry of Education and Science of the Russian Federation will allocate additional funding to universities based on their position in national and international rankings, we aim to intensify our efforts to promote VSU in Russian and international ranking systems, continuously enhancing the university's academic reputation among the global academic community.
- Our joint task is to focus on preparing the planned events for VSU's centennial, whose motto is "VSU for the world, the nation, and the region".

It is of vital importance that an understanding of the tasks the university is facing in 2017 will become the priority for each and every one of us; that it will encourage us to make an objective evaluation of past achievements, identify and involve the reserves so far left unused, and act in a creative, resourceful, and responsible manner.

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## UNIVERSITY ADMINISTRATION



## UNIVERSITY ADMINISTRATION

## 2.1. BOARD OF TRUSTEES: STRUCTURE, LIST OF KEY ISSUES

The Board of Trustees of FSFEI HE Voronezh State University (hereinafter referred to as the VSU Board of Trustees) was created based on the decision taken by the VSU Academic Council dated 28 September 2012 in accordance with the Charter of FSFEI HE VSU (sections 4.17, 4.20–4.32), and is one of VSU's management bodies.

The activities of VSU's Board of Trustees are subject to the Charter of the Board of Trustees of Voronezh State University and the Rules and Procedures of the Board of Trustees of Voronezh State University. The VSU Board of Trustees consists of 28 people.

Deputy Chairs	
of the Board of Trustees –	Alexander Sokolov,
	Elena Soboleva,
	and Evgeny Yurchenko
Secretary	
of the Board of Trustees –	Dmitry Endovitskiy

### **MEMBERS OF THE VSU BOARD OF TRUSTEES**

- 1. Azret Bekkiev, Deputy General Director of AO United Instrument Manufacturing Corporation.
- 2. Vladimir Bubnov, Director General of OOO Kombinat Stroitelnykh Detaley.
- 3. Anton Ganzha, Regional Office Manager of PAO Avangard Joint Stock Commercial Bank.
- 4. Yury Goncharov, President of the Voronezh Regional Chamber of Commerce and Industry.
- 5. Tatiana Davydenko, Vice Rector for Innovations of FSFEI HE V.G. Shukhov Belgorod State Technological University.
- 6. Boris Danshin, Director General of AO Informsvyaz-Chernozemye data provider.
- 7. Dmitry Endovitskiy, Rector of FSFEI HE VSU.



- 8. Viktor Yenin, Director General of UK IP Perspektiva.
- **9.** Valentin levlev, Full Member of the Russian Academy of Sciences, DSc in Physics and Mathematics, Professor, Head of the Department of Materials Science and the Industry of Nanosystems of the Faculty of Chemistry of FSFEI HE VSU.
- **10. Alexey Kamyshev**, Executive Director of AO Chemical Automatics Design Bureau.
- **11. Dmitriy Lapygin,** Director of Economic Affairs of OOO RET.
- **12. Mikhail Moskaltsov**, Head of the main Voronezh regional office of the Central Black Earth Branch of PAO Sberbank.
- 13. Mikhail Nosyrev, attorney, President of ZAO Spartak Cinema.
- **14. Alexey Ponomarev,** Vice President for Strategy & Industrial Cooperation of the Skolkovo Institute of Science and Technology (Moscow).
- **15. Edgars Puzo**, Director General of Atos IT Solutions and Services LLC.
- **16. Igor Risin,** DSc in Economics, Professor, Associate member of the Russian Academy of Natural Sciences, Head of the Department of Regional Economics and Territorial Administration of FSFEI HE VSU.
- 17. Vladimir Salmin, Chairman of the Central Black Earth Branch of PAO Sberbank.
- **18. Elena Soboleva**, Director of Educational Projects and Programmes of the Fund for Infrastructure and Educational Programmes (RUSNANO, Moscow).
- **19. Alexander Sokolov,** Vice President for the Social Policy of PAO Novolipetsk Steel (NLMK).
- **20. Natalia Tretyak**, Director for Legislative Development of the National Research University Higher School of Economics (Moscow).
- **21. Stephen Hagen,** Honorary Professor of the University of South Wales and a higher education expert of the European Commission.
- 22. Heinze Klaus-Dieter, Head of the chemical/industrial technopark (Dow Olefinverbund GmbH Leiter ValuePark, Germany).
- **23.** Andrey Hitskov, Deputy Head of the branch of VoRU PAO MInBank (public joint-stock company Moscow Industrial Bank).
- 24. Valeriy Chernikov, Board Chairman of AO Insurance Business Group.
- 25. Gennadiy Chernushkin, Founder of Angstrem Group.
- 26. Elena Chupandina, First Vice Rector Vice Rector for Academic Affairs of FSFEI HE VSU.
- 27. Anatoliy Shmygalev, Deputy of the VI Voronezh Regional Duma.
- 28. Evgeniy Yurchenko, Chairman of A.S. Popov Investment Fund (Moscow).



The Board of Trustees includes four Commissions: the Commission for the Development of Research and Innovation, the Commission for the Implementation of Academic Policy; the Commission for Expanding VSU's Physical Infrastructure; the Commission for the Social Support of VSU's Students and Staff, as well as a temporary working group formulating proposals on tax concessions for benefactors.

In 2016, there were two scheduled sessions of the Board of Trustees.

The sessions of the Board of Trustees focused on the current issues concerning the University's development: the state and development of VSU's innovation activities; VSU's participation in national and international rankings and the university's strategy aimed at improving its position therein; working on the University development programme for the period up to 2025; devising the activity plan for VSU's 100th anniversary celebration; the replenishment of the VSU Endowment Fund; opportunities for VSU scholars' collaboration with innovation centres in Germany; presenting the innovative projects by VSU scholars, etc.

### **KEY RESULTS OF THE ACTIVITIES OF THE VSU BOARD OF TRUSTEES IN 2016:**

- 1. A new edition of "Rules and Procedures of the VSU Board of Trustees" was approved.
- 2. The members of the Board of Trustees participated in the work of the competition jury at the VSU innovative project contest for young scholars.
- 3. The Board endorsed the decision to allocate the revenue from the discretionary management of the assets of the VSU Endowment Management Fund for the social support for long-serving VSU employees, scholarships for the students, as well as preparing the events to be held as part of the 100th University anniversary ceremony.
- 4. There were a number of proposals aimed at commercializing the results of the innovation projects developed by the University scholars.
- 5. The project for VSU's development strategy was devised.
- 6. The plan of events of the 100th University anniversary ceremony was developed.

Information about the activities of the VSU Board of Trustees may be found on the website of FSFEI HE Voronezh State University: www.vsu.ru



## 2.2. THE ACADEMIC COUNCIL: STRUCTURE, LIST OF KEY ISSUES

### STRUCTURE OF THE ACADEMIC COUNCIL (AS OF 31 MARCH 2017)

#### **1. DMITRY ENDOVITSKIY,**

Rector, Chairman of the Academic Council

#### 2. ELENA CHUPANDINA,

First Vice Rector – Vice Rector for Academic Affairs, Deputy Chairperson of the Academic Council

#### 3. VASILY ANOKHIN,

Vice Rector for Facilities and Capital Development

4. OLEG BELENOV,

Dean of the Faculty of International Relations

#### 5. YURIY BUBNOV,

Vice Rector for Strategic Administrative Management

#### 6. OLEG GRISHAEV,

Vice Rector for Student Affairs and Social Development

7. LARISA KOROBEINIKOVA, Vice Rector in Economics and Contract Services

#### 8. VASILY POPOV,

Vice Rector for Research and Innovations

#### 9. EDUARD ALGAZINOV,

Dean of the Faculty of Computer Sciences

#### **10. ALEXANDER ALBEKOV,**

Associate Professor of the Department of Mineralogy, Petrology, and Geochemistry of the Faculty of Geology

#### **11. VALERIY ARTYUKHOV,**

Dean of the Faculty of Biomedical Sciences

#### 12. YURIY ASTAFIEV,

Head of the Department of Criminal Procedure of the Law Faculty

#### **13. ALEXANDER BAYEV,**

Dean of the Faculty of Mathematics

#### 14. ALEXANDER BELANOV,

Head of the Department of Physical Education and Sports

15. OLGA BERDNIKOVA,

Dean of the Faculty of Philology

#### **16. ANATOLIY BOBRESHOV,**

Dean of the Faculty of Physics



#### 17. OLGA BORISKINA,

Acting Dean of the Faculty of Romance and Germanic Philology

#### **18. KIRA VASILIEVA,**

Academic Secretary

#### **19. LYUDMILA VLADIMIROVA,**

Chairman of the Trade Union Committee of VSU

#### 20. KARINA GAIDAR,

Head of the Department of General and Social Psychology

#### 21. SERGEY GAPONOV,

Head of the Department of Zoology and Parasitology of the Faculty of Biomedical Sciences

#### 22. VLADIMIR GLAZIEV,

Dean of the Faculty of History

#### 23. ALEXANDRA GLUKHOVA,

Head of the Department of Sociology and Politology of the Faculty of History

#### 24. YURIY GORDEEV,

Head of the Department of Theory and Practice of Journalism of the Faculty of Journalism

#### 25. EVELINA DOMASHEVSKAYA,

Head of the Department of Solid-State Physics and Nanostructures of the Faculty of Physics

#### 26. VALENTIN IEVLEV,

Head of the Department of Materials Science and the Industry of Nanosystems of the Faculty of Chemistry

#### 27. PAVEL KANAPUKHIN,

Dean of the Faculty of Economics

#### 28. MAKSIM KIRCHANOV,

Associate Professor of the Department of Regional Studies and International Economies (the Faculty of International Relations)



#### 29. VLADIMIR KOSTIN,

Head of the Department of Mathematical Modelling of the Faculty of Mathematics

#### **30. NIKOLAY KURALESIN,**

Head of the Department of Safety and Basic Medical Training

#### 31. SEMYON KUROLAP,

Head of the Department of Geoecology and Environmental Monitoring of the Faculty of Geography, Geoecology, and Tourism

#### **32. TATIANA LEDENEVA,**

Head of the Department of Computational Mathematics and Applied Information Technologies of the Faculty of Applied Mathematics, Informatics, and Mechanics

#### 33. MIKHAIL MATVEEV,

Head of the Department of Information Technologies in Management of the Faculty of Computer Sciences

#### 34. ARKADIY MINAKOV,

Director of the Regional Scientific Library of Voronezh State University

#### **35. VIKTOR NENAKHOV,**

Dean of the Faculty of Geology

#### **36. TAMARA NIKONOVA,**

Head of the Department of Russian Literature of XX–XXI Centuries, the Theory of Literature and Folklore of the Faculty of Philology

#### 37. ELENA NOSYREVA,

Head of the Department of Civil Law and Procedure of the Faculty of Law

#### 38. OLEG OVCHINNIKOV,

Head of the Department of Optics and Spectroscopy of the Faculty of Physics

#### **39. MIKHAIL PASHCHENKO,**

Director of VSU's Borisoglebsk Branch



#### 40. LYDIA RADINA,

Associate Professor of the Humanities Department

**41. VLADIMIR RODIONOV,** Director of the International Education Institute

#### 42. NATALIA SAPOZHNIKOVA,

Head of the Department of Accountancy of the Faculty of Economics

43. VLADIMIR SELEMENEV,

Head of the Department of Analytical Chemistry of the Faculty of Chemistry

44. VIKTOR SEMYONOV,

Dean of the Faculty of Chemistry

- 45. NIKOLAY SKOLZNEV, Director of the Galichya Gora reserve
- **46. ALEKSEY SLIVKIN,** Dean of the Faculty of Pharmaceutics
- **47. YURY STARILOV,** Dean of the Faculty of Law
- **48. ANDREY STARTSEV,** Chairman of the primary trade union organization of VSU students
- **49. VLADIMIR TULUPOV,** Dean of the Faculty of Journalism
- **50. VLADIMIR FEDOTOV,** Dean of the Faculty of Geography, Geoecology, and Tourism
- **51. IGOR CHASTUKHIN,** Chief Accountant

#### 52. NIKOLAY CHERNYSHOV,

Head of the Department of Mineralogy, Petrology and Geochemistry of the Faculty of Geology



#### 53. ALEXANDER SHASHKIN,

Dean of the Faculty of Applied Mathematics, Informatics, and Mechanics

#### 54. ALEXANDER SCHERBAKOV,

Dean of the Faculty of Military Education

#### 55. VLADIMIR SCHERBAKOV,

Head of the Department of Clinical Pharmacology of the Faculty of Pharmaceutics

#### 56. EKATERINA AKIMOVA,

1st year Master's degree student of the Faculty of Computer Sciences

#### **57. ELENA BOLDYREVA,**

3rd year postgraduate student of the Faculty of Mathematics

#### 58. ELENA VOLKOVA,

2nd year Master's degree student of the Faculty of Economics

#### **59. ALEXEY ELFIMOV,**

4th year student of the Faculty of Physics

#### **60. YAROSLAV ZUBASHCHENKO,**

1st year postgraduate student of the Faculty of Philosophy and Psychology

#### **61. KRISTINA KULESHOVA,**

1st year Master's degree student of the Faculty of Physics

#### 62. MARIYA OBRAZTSOVA,

3rd year student of the Faculty of Philosophy and Psychology

#### **63. NIKITA TITARENKO,**

1st year Master's degree student of the Faculty of Applied Mathematics, Informatics, and Mechanics

#### 64. IRINA TRISHINA,

2nd year postgraduate student of the Faculty of Applied Mathematics, Informatics, and Mechanics





### LIST OF KEY ISSUES CONSIDERED BY THE ACADEMIC COUNCIL IN 2016

#### JANUARY

- 1. Report on the results of the University's research performance in 2015.
- 2. The University's innovation activity in 2015 and the commercialization of the results from R&D projects.
- 3. Inclusive education at the University: current stage of development and way forward.

#### **FEBRUARY**

- 1. The strategic development plan for the Faculty of History
- 2. Social partnership at the University.
- 3. Report on the implementation of the University's further education programmes in 2015.

#### MARCH

- 1. Financial and operating performance of VSU: the results of 2015 and adoption of the budget for 2016.
- 2. The partnership between Voronezh State University and industrial enterprises aimed at creating high-tech production plants.

#### APRIL

- 1. Rector's report on the results of the University's performance in 2015.
- 2. Approving the tuition fees for each of the categories of the University students in 2015/16 academic year.
- 3. Awarding academic titles to the University employees.
- 4. Organizing the University employee and student conference regarding the election of the rector.

#### MAY

- 1. Report regarding the implementation of the plan of anti-corruption measures at the University in 2015, and the plan for 2016.
- 2. Report on the implementation of the University volunteer programmes.



#### JUNE

- 1. The electronic document management system at the University.
- 2. The implementation of the Academic Council's decisions in 2015/16, and approving the plan of the Council's activities in 2016/17.
- 3. The implementation of the University's property assets modernisation plan in 2015/16.
- 4. Approving personal scholarships for the students enrolled in the main academic programmes of higher education.
- 5. Determining and approving the academic staff teaching load for the 2016/17 academic year.
- 6. Competition, election.

#### SEPTEMBER

- 1. The results of the 2016 admission campaign. Report on the results of the University's educational activity in 2015/16 academic year.
- 2. Forming a purchasing plan for the 2016/17 academic year.
- 3. Cold weather adaptation of the University buildings and facilities.
- 4. Approving the admission rules for the main academic programmes offered by VSU in 2017. Allocating the admission quotas among the programmes.

#### OCTOBER

- 1. The results of the educational activity in higher professional and secondary vocational education programmes in 2015/16.
- 2. Report on the results of the performance of the University's branch in Borisoglebsk in 2015/16.
- 3. Report on the University's social development in 2015/16, and approving the plan for the next academic year.

#### NOVEMBER

- 1. The strategic development plan for the Faculty of Chemistry.
- 2. The partnership between Voronezh State University and industrial enterprises aimed at creating high-tech production plants.
- 3. Approving the plan for improving the system of budgeting at the University.

#### DECEMBER

- 1. VSU internationalization: the year in review, upcoming trends.
- 2. Report on the performance of the International Education Institute.

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3. The organizational changes in the University's structure.



## 2.3. RECTOR'S OFFICE

#### Rector

#### **Dmitry ENDOVITSKIY**

DSc in Economics, Professor. Honoured Worker of the Highest Vocational Education of the Russian Federation. The author of 369 research papers and works.

Telephone: +7 (473) 220-75-22 E-mail: rector@vsu.ru

#### First Vice Rector - Vice Rector for Academic Affairs

#### **Elena CHUPANDINA**

D.Sc. in Pharmaceutical Sciences, Associate Professor, Head of the Department of Economics and Management in Pharmaceutics and Pharmacognosy. The author of 216 research papers and works.

Telephone: +7 (473) 220-87-31 E-mail: chupandina@vsu.ru

### Vice Rector for Research and Innovations

#### **Vasily POPOV**

DSc in Biology, Professor, Head of the Department of Genetics, Cytology, and Bioengineering. The author of over 290 research papers and works. Advisor for 11 PhD theses.

Telephone: +7 (473) 220-75-33 E-mail: popov@vsu.ru



#### Vice Rector for Economics and Contract Services

#### Larisa KOROBEINIKOVA

PhD in Economics, Associate Professor, Head of the Department of Economic Analysis and Audit. The author of over 200 research papers and works, including two monographs.

Telephone: +7 (473) 220-84-09 E-mail: korobeinikova@vsu.ru

#### Vice Rector for Strategic Administrative Management

#### **Yuriy BUBNOV**

DSc in Philosophy, Professor, Dean of the Faculty of Philosophy and Psychology The author of 148 research papers and works. Advisor for 1 postdoctoral and 8 PhD theses.

Telephone: +7 (473) 220-77-73 E-mail: bubnov@vsu.ru

#### Vice Rector for Student Affairs and Social Development

#### **Oleg GRISHAEV**

VSU graduate. Started working at VSU in 1988. PhD in History, Associate Professor The author of over 90 research papers and works. Advisor for 1 PhD theses.

Telephone: +7 (473) 239-06-86 E-mail: grishaev@vsu.ru

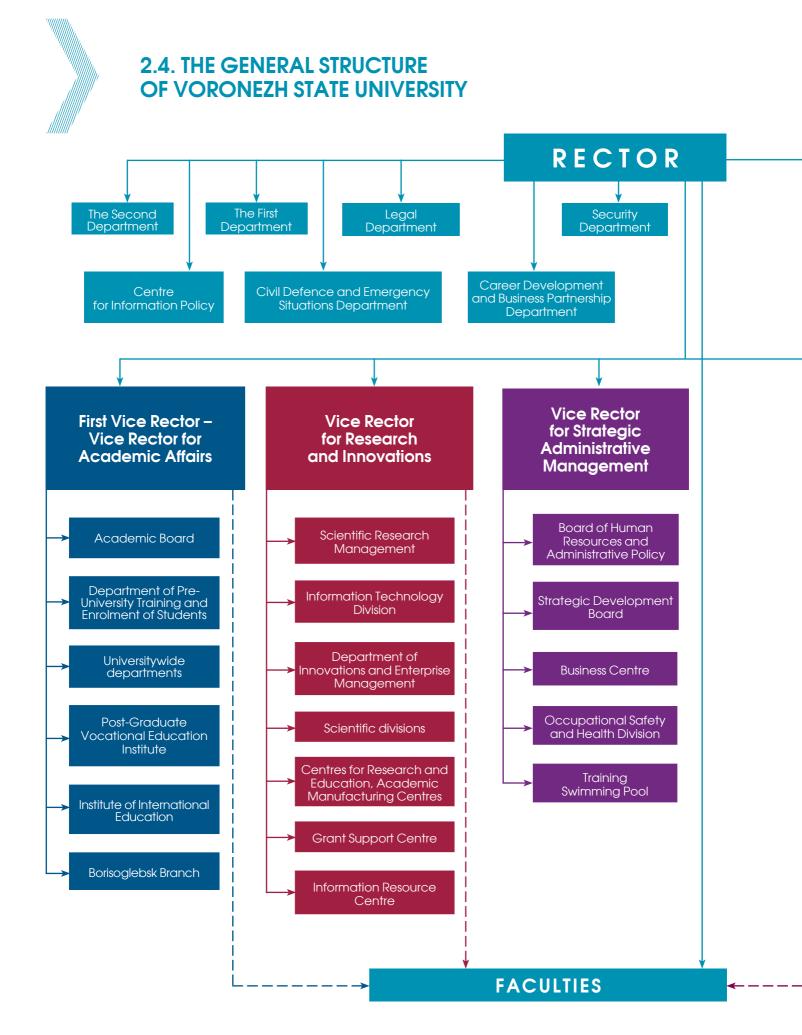
#### Vice Rector for Facilities and Capital Development

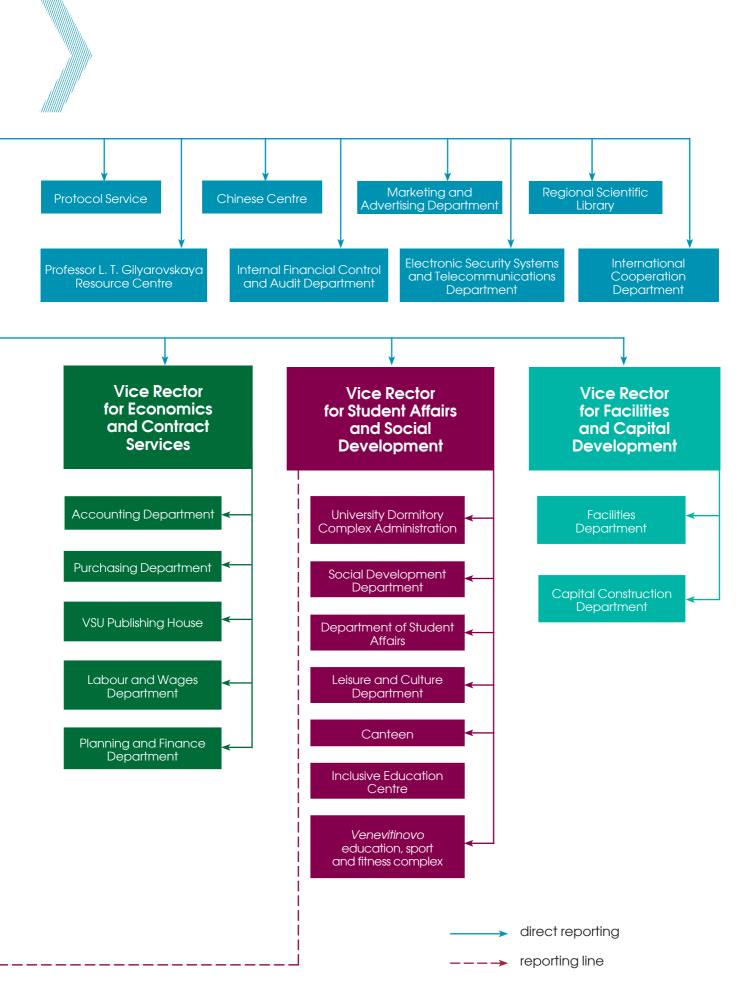
#### **VASILY ANOKHIN**

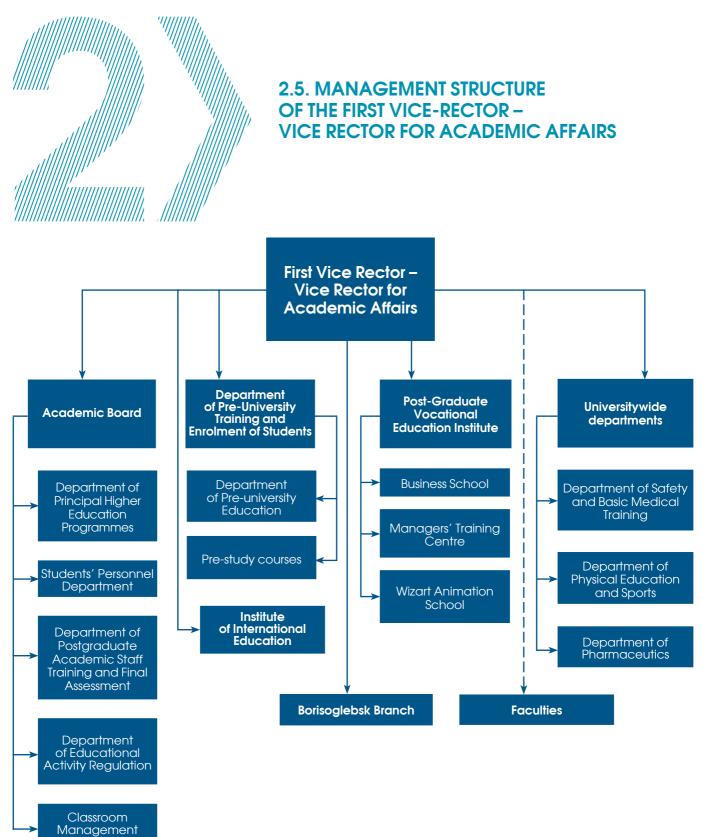
Graduate of Voronezh Engineering and Construction Institute. Started working at VSU in 2013.

Telephone: +7 (473) 220-75-18 E-mail: anokhin@vsu.ru





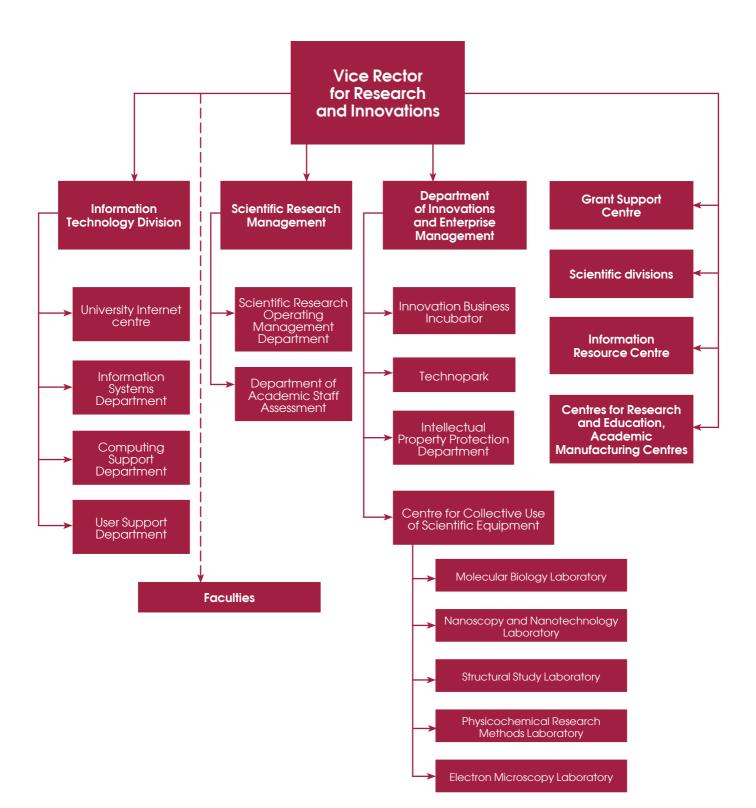




Department

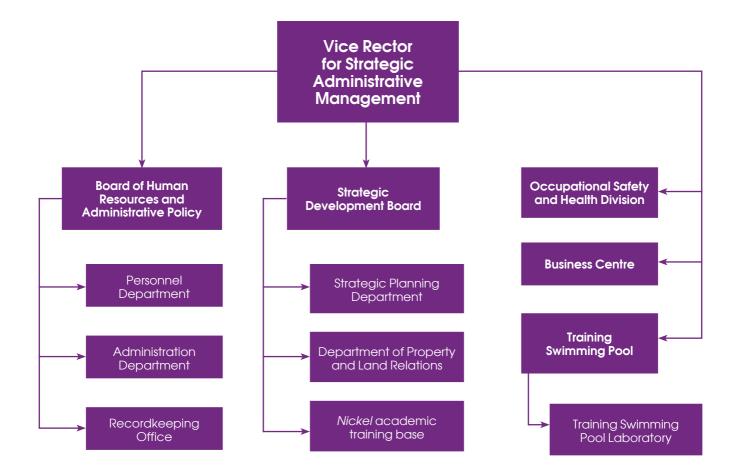


## 2.6. MANAGEMENT STRUCTURE OF THE VICE RECTOR FOR RESEARCH AND INNOVATIONS



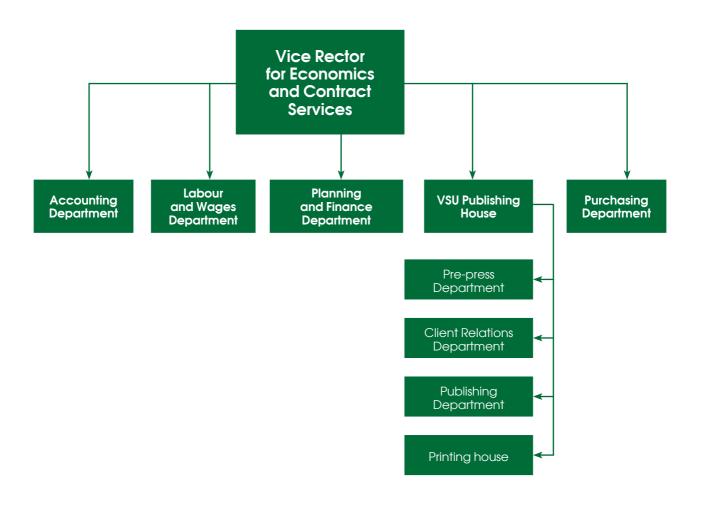


## 2.7. MANAGEMENT STRUCTURE OF THE VICE RECTOR FOR STRATEGIC ADMINISTRATIVA MANAGEMENT



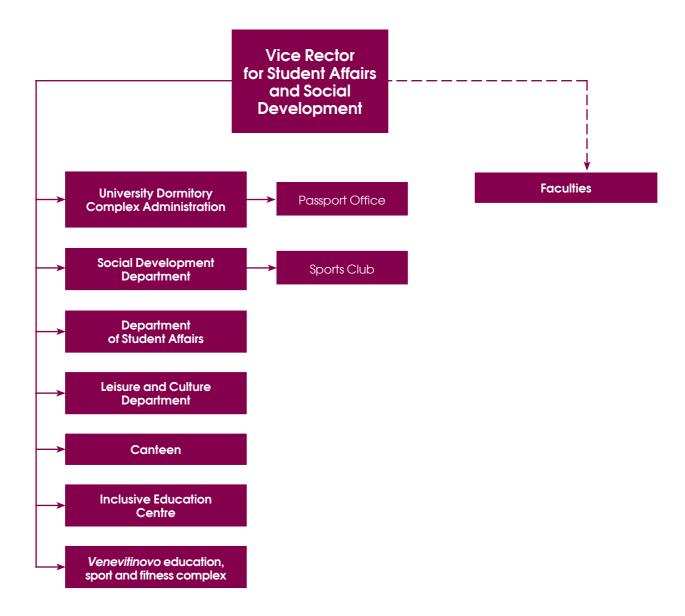


## 2.8. MANAGEMENT STRUCTURE OF THE VICE RECTOR FOR ECONOMICS AND CONTRACT SERVICES



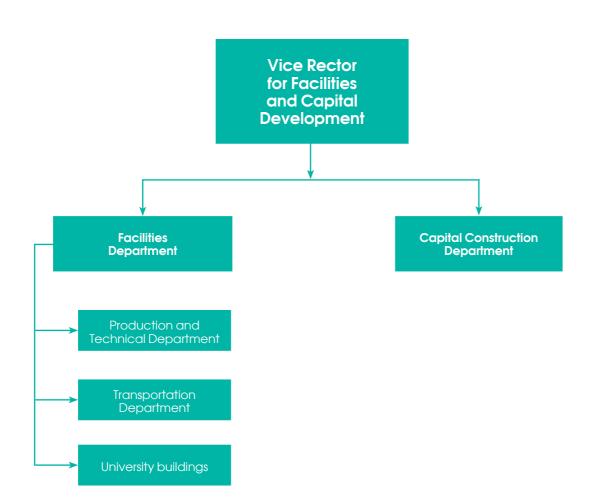


## 2.9. MANAGEMENT STRUCTURE OF THE VICE RECTOR FOR STUDENT AFFAIRS AND SOCIAL DEVELOPMENT











## 2.11. FACULTIES AND INSTITUTES

#### THE FACULTY OF GEOLOGY

Dean **VIKTOR NENAKHOV** Telephone: +7 (473) 220-89-89 E-mail: nenakhov@geol.vsu.ru

#### THE FACULTY OF HISTORY

Dean VLADIMIR GLAZIEV Telephone: +7 (473) 221-27-47 E-mail: glaziev@hist.vsu.ru

#### THE FACULTY OF MATHEMATICS

Dean **ALEXANDER BAEV** Telephone: +7 (473) 220-84-01 E-mail: baev@math.vsu.ru

#### THE FACULTY OF BIOMEDICAL SCIENCES

Dean VALERIY ARTYUKHOV Telephone: +7 (473) 220-88-52 E-mail: artyukhov@bio.vsu.ru

#### THE FACULTY OF MILITARY EDUCATION

Dean **ALEXANDER SHCHERBAKOV** Telephone: +7 (473) 255-15-97 E-mail: scherbakov@mil.vsu.ru

#### THE FACULTY OF GEOGRAPHY, GEOECOLOGY, AND TOURISM

Dean VLADIMIR FEDOTOV Telephone: +7 (473) 266-56-54 E-mail: fedotov@geogr.vsu.ru

#### THE FACULTY OF JOURNALISM

Dean **VLADIMIR TULUPOV** Telephone: +7 (473) 274-52-71 E-mail: vlvtul@mail.ru

#### THE FACULTY OF COMPUTER SCIENCES

Dean **EDUARD ALGAZINOV** Telephone: +7 (473) 220-84-11 E-mail: algazinov@sc.vsu.ru

#### THE FACULTY OF APPLIED MATHEMATICS, INFORMATICS, AND MECHANICS

Dean **ALEXANDER SHASHKIN** Telephone: +7 (473) 220-82-66 E-mail: shashkin@amm.vsu.ru

#### THE FACULTY OF ROMANCE AND GERMANIC PHILOLOGY

Acting Dean **OLGA BORISKINA** Telephone: +7 (473) 220-84-22 E-mail: boriskina@rgph.vsu.ru

#### THE FACULTY OF PHILOSOPHY AND PSYCHOLOGY

Dean **YURIY BUBNOV** Telephone: +7 (473) 220-82-52 E-mail: bubnov@phipsy.vsu.ru

#### THE FACULTY OF PHARMACEUTICS

Dean **ALEKSEY SLIVKIN** Telephone: +7 (473) 253-04-28 E-mail: slivkin@pharm.vsu.ru

#### THE FACULTY OF PHYSICS

Dean ANATOLIY BOBRESHOV

Telephone: +7 (473) 220-83-96 E-mail: bobreshov@phys.vsu.ru



#### THE FACULTY OF PHILOLOGY

Dean **OLGA BERDNIKOVA** Telephone: +7 (473) 220-41-38 E-mail: berdnikova@phil.vsu.ru

#### THE FACULTY OF CHEMISTRY

Dean **VIKTOR SEMYONOV** Telephone: +7 (473) 220-87-97 E-mail: semenov@chem.vsu.ru

#### THE FACULTY OF ECONOMICS

Dean **PAVEL KANAPUKHIN** Telephone: +7 (473) 234-90-51 E-mail: kanapukhin@econ.vsu.ru

#### THE FACULTY OF LAW

Dean **YURIY STARILOV** Telephone: +7 (473) 255-84-86 E-mail: starilov@law.vsu.ru

#### THE FACULTY OF INTERNATIONAL RELATIONS

Dean **OLEG BELENOV** Telephone: +7 (473) 239-29-31 E-mail: belenov@ir.vsu.ru

#### INSTITUTE OF INTERNATIONAL EDUCATION

Director VLADIMIR RODIONOV Telephone: +7 (473) 266-33-50 E-mail: rodionov@interedu.vsu.ru

#### POST-GRADUATE VOCATIONAL EDUCATION INSTITUTE

Director **NIKOLAY BATSUNOV** Telephone: +7 (473) 252-45-34 E-mail: batsunov@pdi.vsu.ru

#### **GEOLOGY RESEARCH INSTITUTE**

Director **KONSTANTIN SAVKO** Telephone: +7 (473) 222-64-19 E-mail: ksavko@geol.vsu.ru

#### MATHEMATICS RESEARCH INSTITUTE

Director VIKTOR ZVYAGIN Telephone:+7 (473) 220-86-57 E-mail: zvg@math.vsu.ru

#### SOCIAL AND POLITICAL STUDIES INSTITUTE

Director **ALEXANDRA GLUKHOVA** Telephone:+7 (473) 221-97-43 E-mail: office@case.vsu.ru

#### PHYSICS RESEARCH INSTITUTE

Director **ANATOLIY CHURIKOV** Telephone:+7 (473) 220-83-30 E-mail: churikov@niif.vsu.ru

#### CHEMISTRY AND PHARMACY RESEARCH INSTITUTE

Director VLADIMIR SELEMENEV Telephone: +7 (473) 220-83-62 E-mail: journal@chem.vsu.ru

#### **BORISOGLEBSK BRANCH**

Director **MIKHAIL PASHCHENKO** Telephone: +7 (473) 546-04-92 E-mail: paschenko@bsk.vsu.ru















# UNIVERSITY STRATEGIC DEVELOPMENT





**Yuriy Bubnov,** Vice Rector for Strategic Administrative Management

## UNIVERSITY STRATEGIC DEVELOPMENT

## 3.1. MISSION, VISION, STRATEGIC OBJECTIVES, AND PROMISING PROJECTS OF THE UNIVERSITY

The mission of the university is to preserve and build upon the traditions of classical Russian education and research in all their diversity, thus shaping the cultural and intellectual life of society and meeting the needs for highly qualified specialists, innovative development, and ideas. VSU is a modern classical university:

- offering a wide range of academic programmes and research projects in the area of natural sciences and humanities;
- demonstrating a world-class level of quality and competencies;
- welcoming students from Russia and any other country of the world, irrespective of their social status or any disabilities;
- maintaining a high level of integration into the global processes of academic and scientific exchange;
- creating favourable conditions for fulfilling the potential of the students, as well as the academic and research staff.



Our strategic goal for the nearest future is to ensure VSU's comprehensive sustainable development as a leading Russian classical university, which suggests addressing a number of strategic tasks:

- training highly-qualified, eminently employable professionals, able to contribute significantly to the development of the education, science, culture, and economics, on the regional and national level, with the help of their deep fundamental scientific knowledge and target-oriented practical skills;
- dynamic development of fundamental and applied science on the global level as a basis for training top specialists and working on unique progressive technologies;
- attracting young and talented lecturers and researchers, and encouraging them to opt for employment at the university through developing the professional growth motivation system and enhancing material well-being and the facilities necessary for research and academic activities;
- increasing the quality of education by means of improving and modernizing the existing academic programmes and establishing new, modern ones;
- using the applied projects and technology commercialization as a significant source of the university's income;
- comprehensive integration of the university's activities with its strategic Russian and international partners, aimed at maintaining long-term cooperation in the areas of education, culture, and research.

The strategic management of the university's activities is based on **VSU's Project Map**, which includes long-term strategic initiatives in various functional areas (education, research and innovation, internationalisation, social work, infrastructure, etc.).





## 3.2. VSU'S STRATEGIC DEVELOPMENT PROGRAMME FOR 2012–2016: ACHIEVING TARGET INDICATORS

The reporting year saw the final stage of the implementation of the 2012–2016 Voronezh State University Strategic Development Programme. Total funding for the programme's events amounted to:

- **237.22 million roubles** of federal financing;
- **414.00 million roubles** of extra-budgetary funding.

The implementation of the Programme ensured finding solutions to a number of strategic tasks (Table 3.1):

- modernizing the educational process: opening new academic programmes, including practice-oriented academic programmes run jointly with employers, as well as the leading international universities (academic exchange and dual degree programmes); increasing the contingent and percentage of students in master's degree programs, as well as the number of international students;
- modernizing the research capacity and innovation activity: funding the research in top-priority areas (nanotechnologies and materials, information technologies, physico-chemical biology and bioengineering, applied material studies, and exploration geology), which ensured the growth in both the quantity and quality of research papers, as well as intensive development of innovation activities aimed at creating high-tech production plants, and maintaining VSU's reputation as a leading innovation centre of the Central Black Earth Region;
- human resource development and ensuring a high level of excellence of the students: transition of the the academic staff to the "effective contract" system, increasing academic mobility, supporting research teams on the national and international level, and encouraging the young generation of promising scholars and lecturers to opt for employment at the university;
- modernizing the infrastructure: purchasing state-of-the-art training and laboratory equipment, including modern scientific equipment to be used in top-priority research areas; expanding the university's telecommunication system; as well as major repair works in the university buildings and dormitories;
- enhancing the organizational structure of the university and improving the efficiency of management: implementing a project-based management target approach (VSU's Project Map, which is revised annually); improving the university's information disclosure improvement (a public annual report, a constant flow of online information in Russian and English), introducing an electronic document flow system, completing the certification of all VSU's key processes' compliance with the ISO 9001 international quality standard (for all faculties and academic programmes).

# 

#### Table 3.1

## KEY PERFORMANCE INDICATORS OF THE STRATEGIC DEVELOPMENT PROGRAMME

No	Sets of parameters, parameters	Unit	2011	2016	Growth ratio, %
1.	Educational activity success indicators				
1.1.	The number of main academic programmes in accordance with the licence for educational activities:	units	152	179	117.76
1.1.1.	Bachelor's degree course, diploma degree (specialist) course	units	44	60	136.36
1.1.2.	Master's degree course	units	32	39	121.88
1.1.3.	postgraduate course	units	77	80	103.90
1.2.	The share of Master's degree students among the normalized contingent at the university	%	8.5	16.87	198.47
1.3.	The number of postgraduate students per 100 students of the normalized contingent	Number of people	5.1	4.15	81.37
1.4.	The share of postgraduate students having defended their dissertation in due time and within one year after the completion of their course of studies, among all the postgraduate students completing the course in the given year	%	37	27.17	73.43
1.5.	Average annual contingent in advanced training and retraining programmes	Number of people	146	497	340.41
1.6.	The share of university graduates obtaining employment in their professional field (within three years after graduation)	%	87.3	98.51	112.84
1.7.	The share of international students from the countries of the CIS, the Baltics, Georgia, Abkhazia, and South Ossetia, among the normalized contingent at the university	%	1.1	2.79	253.64
1.8.	The share of international students from countries other than the CIS, the Baltics, Georgia, Abkhazia, and South Ossetia, among the normalized contingent at the university	%	2.6	3.35	128.85
1.9.	The share of regular staff from the total number of FTEs at the university	%	96	98.07	102.16
1.10.	The share of regular staff from the total number of regular FTEs at the university				
1.10.1.	under 30	%	12.1	16.31	134.79
1.10.2.	30 to 39	%	24.9	28.88	115.98
1.11.	The share of regular staff having a PhD or a D.Sc. degree from the total number of regular FTEs at the	university			
1.11.1.	in total	%	72.94	76.29	104.59
1.11.2.	under 30	%	4.0	7.66	191.50
1.11.3.	30 to 39	%	18.5	22.22	120.11
1.12.	The number of textbooks and study guides written by regular staff from the total number of regular FTEs at the university	units	0.17	0.30	176.47



Table cont. 3.1	3.1
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No	Sets of parameters, parameters	Unit	2011	2016	Growth ratio, %
2.	The indicators of research capacity effectiveness				
2.1.	The share of full-time students participating in scientific research and development for a salary or as joint participants in R&D reports, among the total number of full-time students of the university	%	5.1	5.94	116.47
2.2.	The amount of R&D financing from all sources	million roubles	172	306.61	178.26
2.3.	The share of R&D financing from the total amount of financing	%	11.4	15.16	132.98
2.4.	The amount of the financing for R&D performed under administrative agreements	million roubles	41.4	76.627	185.09
2.5.	The amount of R&D financing from the total number of FTEs at the university	thousand roubles	153.5	202.3	131.79
2.6.	The number of FTEs among the university's academic staff members	Number of people	209	293	140.19
2.7.	The number of dissertations defended by regular academic staff members at the university from the total number of regular FTEs at the university	units	0.02	0.0105	52.50
2.8.	The number of monographs written by regular academic staff members from the total number of regular FTEs at the university	units	0.06	0.0569	71.13
2.9.	The number of articles written by the regular academic staff members and published in scientific periodical publications indexed by national and international organizations (Web of Science, Scopus, Russian Science Citation Index), as well as in Russian peer-reviewed journals, from the total number of regular FTEs at the university	units	1.33	4.10	308.27
3.	Success indicators of innovative activities				
3.1.	The number of applications for documents of title for intellectual property	units	25	81	324
3.2.	The amount of registered software for computers, databases, integrated circuit layouts	units	5	32	640
3.3.	The number of patents	units	22	36	163.64
3.4.	The number of patents held	units	37	74	200
3.5.	The number of license agreements for other organisations to use intellectual property owned by the university	units	6	21	350
3.6.	The number of small innovative enterprises (business companies) created by the university in accordance with Federal Law No 217-FZ of 2 August 2009	units	14	32	228.57
3.7.	Total financing of the university's activity using the funds from the international companies and organisations	million roubles	2.0	13.9	695



No	Sets of parameters, parameters	Unit	2011	2016	Growth ratio, %
4.	Indicators of financial and resource sustainability				
4.1.	Carrying value of the most valuable assets, net of depreciation	million roubles	118.5	213.2	179.92
4.2.	Total university income, including:	million roubles	1513.3	2021.9	133.61
4.2.1.	financing by estimate (through the founder's subsidies), total	million roubles	834.0	950.3	113.94
4.2.2.	funds obtained through R&D from other sources	million roubles	87.1	184.3	211.60
4.2.3.	funds obtained from commercial educational services	million roubles	589.6	821.1	139.26
4.2.4.	other sources	million roubles	2.6	66.2	2546
4.3.	Average salary of academic staff members at the	university:			
4.3.1.	in total	thousand roubles	19.1	35.963	188.29
4.3.2.	Assistant	thousand roubles	12.0	21.611	180.09
4.3.3.	Associate Professor	thousand roubles	19.0	37.192	195.75
4.3.4.	Professors	thousand roubles	24.5	52.436	214.02
4.3.5.	Heads of Departments	thousand roubles	26.9	66.020	245.43
4.3.6.	Deans	thousand roubles	37.8	85.617	226.50
4.4.	The ratio of the average monthly salary of academic staff members at the university compared to the average monthly salary in the Russian Federation in relation to the university's location	%	112	150.80	134.64
4.5.	The share of the funds obtained through income-generating activities from the total amount of funding received by the university from all sources	%	44.9	53.00	118.04
4.6.	The share of the funds from all sources used by the university for maintaining its properties	%	7.6	9.88	130.00
4.7.	The share of the funds from all sources used by the university for developing its properties	%	6.6	9.41	142.58
4.8.	The share of students provided with a place in a dormitory	%	72	96.9	134.58

#### End of table 3.1





# 3.3. VSU's PERFORMANCE IN INTERNATIONAL AND NATIONAL UNIVERSITY RANKINGS

Voronezh State University's position in national and international rankings can be seen in Table 3.2.

Table 3.2

# VSU'S POSITION IN UNIVERSITY RANKINGS

	2016*
Name of the ranking	
Interfax National University Rating:	27
Education	19
Research	23
Socialisation	29=
Internationalization	40=
Brand	25=
Innovations	54
Expert RA Rating of Russian Universities	42
"Expert RA" Universities reputation rating:	
Engineering, natural and exact sciences	49
Economics and Management	22
Ranking of most demanded universities of the Russian Federation Classical universities ("Rossia Segodnya")	12
Top Russian universities, according to Vladimir Potanin Foundation	24
Ranking of Russian universities by the salaries of young specialists, acc	ording to Superjob:
Economic universities	17=
Law universities	6=
Academic Ranking of World Universities (ARWU)	501+
-	501+ 701+ (RF: 22)
Quacquarelli Symonds (QS) World University Ranking	
<b>Quacquarelli Symonds (QS) World University Ranking</b> Quacquarelli Symonds (QS): BRICS	701+ (RF: 22)
<b>Quacquarelli Symonds (QS) World University Ranking</b> Quacquarelli Symonds (QS): BRICS Quacquarelli Symonds (QS): Emerging Europe & Central Asia	<b>701+ (RF: 22)</b> 111–120
<b>Quacquarelli Symonds (QS) World University Ranking</b> Quacquarelli Symonds (QS): BRICS Quacquarelli Symonds (QS): Emerging Europe & Central Asia	<b>701+ (RF: 22)</b> 111–120 99=
Quacquarelli Symonds (QS) World University Ranking Quacquarelli Symonds (QS): BRICS Quacquarelli Symonds (QS): Emerging Europe & Central Asia Quacquarelli Symonds (QS) STARS University Rating	701+ (RF: 22) 111-120 99= ***
Quacquarelli Symonds (QS) World University Ranking Quacquarelli Symonds (QS): BRICS Quacquarelli Symonds (QS): Emerging Europe & Central Asia Quacquarelli Symonds (QS) STARS University Rating Research	<pre>701+ (RF: 22) 111-120 99= *** **</pre>
Quacquarelli Symonds (QS) World University Ranking         Quacquarelli Symonds (QS): BRICS         Quacquarelli Symonds (QS): Emerging Europe & Central Asia         Quacquarelli Symonds (QS) STARS University Rating         Research         Teaching         Internationalization	<pre>701+ (RF: 22) 111-120 99= *** ** ** **</pre>
Quacquarelli Symonds (QS) World University Ranking Quacquarelli Symonds (QS): BRICS Quacquarelli Symonds (QS): Emerging Europe & Central Asia Quacquarelli Symonds (QS) STARS University Rating Research Teaching	<pre>701+ (RF: 22) 111-120 99= *** ** ** ** *********************</pre>
Teaching Internationalization Employability	<pre>701+ (RF: 22) 111-120 99= *** ** ** ** ** ** ** ************</pre>



#### End of table 3.2

Name of the ranking	2016*
Times Higher Education (THE) World University Ranking	801+ (RF: 24)
Times Higher Education (THE) BRICS & Emerging Economies University Rankings	251–300
Times Higher Education (THE) Best Universities in Europe	354=
SCImago Institutions Ranking (SIR)	672 (RF: 86)
University Ranking by Academic Performance (URAP)	1900 (RF: 20)
Webometrics Ranking of World Universities	2151 (RF: 23)
Round University Ranking (RUR)	609 (RF: 18)
Humanities	464 (RF: 7)
Life Sciences	516 (RF: 12)
Medical Sciences	432 (RF: 5)
Natural Sciences	488 (RF: 15)
Social Sciences	548 (RF: 11)
Technical Sciences	431 (RF: 13)
Round University Ranking (RUR) Reputation Ranking	569= (RF: 17)
Round University Ranking (RUR) Research Performance Ranking	659 (RF: 12)
UI GreenMetric World University Ranking	144 (RF: 2)
Setting and Infrastructure	391
Energy and Climate Change	228
Waste	86
Water	150
Transportation	74
Education	166
Academic Ranking of World Universities – European Standard (ARES)	A+
Worldwide Professional University Ranking (RankPro)	546
Wikipedia Ranking of World Universities (PageRank / CheiRank)	767 / 574

\* For global rankings, the position in the world and in Russia is provided.



# 3.4. INFORMATION ON PASSING THE UNIVERSITY EFFICIENCY MONITORING

The monitoring of the performance of state higher education institutions is held annually by the Ministry of Education and Science of the Russian Federation. In 2016, universities were adjudged effective if they achieved at least 4 KPIs out 7 (Table 3.3, Fig. 3.1). The results of the monitoring may be found on the website of the Main Data-Computing Centre of the Ministry of Education and Science of the Russian Federation at http:// indicators.miccedu.ru/monitoring/?m=vpo

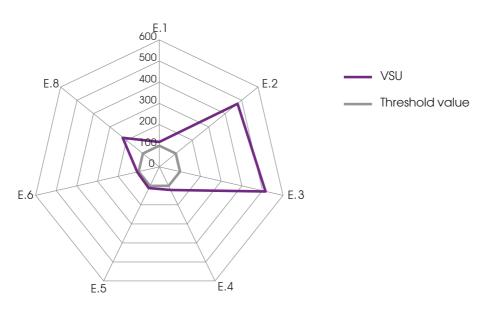
#### Table 3.3

# VSU'S POSITION ON KEY EFFICIENCY MONITORING INDICATORS COMPARED TO THE THRESHOLD VALUES (7 indicators achieved out of 7)

No	Indicator title	Values	Threshold value	Prior Year Adjustment
E.1	Educational activity (average state exam score)	66.8	60	+2.4% (65.21)
E.2	Research and Development (Research and Development per faculty member, thousand roubles)	244.34	51.28	-13.8% (283.37)
E.3	International activities (share of international students among the normalized contingent, %)	5.14	1	+17.4% (4.38)
E.4	Financial and economic activity (the income from all sources per faculty member, thousand roubles)	1609.11	1327.57	-5.2% (1697.81)
E.5	Salary of academic staff members (percent of the average salary in the region)	149.21	133	+15.0% (129.71)
E.6	Employment (according to the Pension Fund of the Russian Federation, %)	80	75	-
E.8	Additional indicator (staff with PhD per 100 students)	6.08	2.78	+6.1% (5.73)

#### Figure 3.1

#### THE ACHIEVEMENT OF TARGET PARAMETERS FOR PERFORMANCE MONITORING, %





The results of the performance monitoring by field are shown in Table 3.5.

Table 3.4

## THE RESULTS OF THE PERFORMANCE MONITORING BY FIELD

# 

No	Indicator title	Units of measurement	Values
	Academic and related support		
1.1	The average state exam grade of the students who enrolled in full-time bachelor's degree and diploma degree (specialist) study programmes funded by the state budget of the Russian Federation.	grade	69.74
1.2	The average state exam grade of the students who enrolled in full-time bachelor's degree and diploma degree (specialist) study programmes funded by the state budget of the Russian Federation, except for those who enrolled due to special privileges or under employer-sponsored quotas.	grade	69.41
1.3	The average state exam grade of the students who enrolled in full-time bachelor's degree and diploma degree (specialist) study programmes with the education cost covered by natural and legal persons.	grade	63.75
1.4	Minimal state exam grade of the students who enrolled in full- time bachelor's degree and diploma degree (specialist) study programmes, average for the existing programmes (discipline areas)	grade	48.83
1.5	The number of student winners and awardees of the final stage of the All-Russian Academic Competition among Schoolchildren, members of the Russian Federation national teams having taken part in international contests in general subjects or discipline areas corresponding to the the All-Russian Academic Competition profile, who enrolled in full-time bachelor's degree and diploma degree (specialist) study programmes without any admission tests	Number of people	2
1.6	The number of student winners and awardees of the academic competitions held among schoolchildren who enrolled in full-time bachelor's degree and diploma degree (specialist) study programmes in the discipline areas corresponding to the competition profile without any admission tests.	Number of people	13
1.7	The number of employer-sponsored students who enrolled in full- time bachelor's degree and diploma degree (specialist) study programmes	Number of people	62
1.8	The percentage of the number of employer-sponsored students who enrolled in full-time bachelor's and diploma degree (specialist) study programmes from the total number of students having enrolled in full-time bachelor's degree and diploma degree (specialist) degree programmes	%	2.24
1.9	The percentage of the normalized contingent enrolled in master's degree programmes from the total number of the normalized contingent enrolled in bachelor's, specialist's, and master's degree programmes	%	13.24
1.10	The percentage of the adjusted contingent of master's degree and post-graduate students, interns, residents, and assistant interns from the total number of the normalized contingent enrolled in the main academic programmes of higher education	%	17.08
1.11	The percentage of students having a bachelor's, specialist's or master's degree obtained in another establishment who enrolled in master's degree programmes of the educational establishment from the total number of students having enrolled in full-time master's degree programmes	%	9.02



Table cont. 3.4	
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No	Indicator title	Units of measurement	Values
1.12	The percentage of master's degree and post-graduate students, interns, residents, and assistant interns having a bachelor's, specialist's or master's degree obtained in another establishment from the total number of master's degree and post-graduate students, interns, residents, and assistant interns	%	82.84
1.13	The number of postgraduate students, interns, residents, and assistant interns per 100 students of the normalized contingent at the university	Number 5.44	
1.14	The percentage of the participants from outside organizations from the total number of participants completing advanced training or retraining programmes at the university	%	72.84
1.15	The percentage of the students enrolled in full-time employer- sponsored bachelor's, specialist's, and master's degree programmes in Engineering, Technologies and Technical Sciences, Healthcare and Medical Sciences, and Education and Pedagogical Sciences, from the total number of students enrolled in the study programs in these areas	% 1.31	
	Research		
2.1	Number of citations of publications issued in the last five years, indexed in the Web of Science information and analysis system of science citation, per 100 academic staff members	units	111.49
2.2	Number of citations of publications issued in the last five years, indexed in the Scopus information and analysis system of science citation, per 100 academic staff members	units	140.18
2.3	The number of citations of publications issued in the last five years, indexed in the Russian Science Citation Index, per 100 academic staff members	units	1327.01
2.4	Number of publications indexed in the Web of Science information and analysis system of science citation, per 100 academic staff members	units	15.84
2.5	Number of publications indexed in the Scopus information and analysis system of science citation, per 100 academic staff members	units	22.37
2.6	Number of publications indexed in the Russian Science Citation Index information and analysis system of science citation, per 100 academic staff members	units	354.83
2.7	The total amount of research and design and experimental work (hereinafter referred to as R&D)	thousand roubles	351,744.00
2.8	The share of income from R&D from the total income of the educational establishment	%	15.19
2.9	The share of R&D conducted without subcontracting from the total income of the educational establishment obtained from R&D	%	96.68
2.10	The income obtained from R&D (with the exception of income from the state budget of the Russian Federation and funding from national science foundations) per academic staff member	thousand roubles	94.47
2.11	The number of license agreements	units	5
2.12	The amount of finance obtained by the university from utilizing the results of intellectual activities from the total income of the educational establishment	%	0.00

#### Table cont. 3.4

No	Indicator title	Units of	Values
2.13	The percentage of academic staff members without a degree aged under 30, PhD – under 35, D.Sc. – under 40, among the academic staff members	measurement %	33.17
2.14	The percentage of academic staff members having obtained a PhD or a D.Sc. degree in the reporting period from the total number of academic staff members	%	1.86
2.15	The number of journals, including electronic journals, published by the university	units	20
2.16	The number of grants obtained in the reporting year per 100 academic staff members	units	7.92
	International activity	_	
3.1	The percentage of international students (except CIS countries) enrolled in bachelor's, specialist's, and master's degree programmes, from the normalized contingent	%	3.17
3.2	The percentage of international students from CIS countries enrolled in bachelor's, specialist's, and master's degree programmes, from the normalized contingent	%	1.96
3.3	The percentage of international students having completed bachelor's, specialist's, and master's degree programmes, from the normalized contingent	%	4.12
3.4	The percentage of international students (except CIS countries) having completed bachelor's, specialist's, and master's degree programmes, from the normalized contingent	%	3.25
3.5	The percentage of international students (from CIS countries) having completed bachelor's, specialist's, and master's degree programmes, from the normalized contingent	%	0.87
3.6	The percentage of the students enrolled in full-time bachelor's, specialist's, and master's degree programmes who spent at least a semester (academic term) studying abroad	%	0.77
3.7	The number of the students of international educational establishments having completed a full-time bachelor's, specialist's, or master's degree programmes at the university for at least a semester (academic term) per 100 full-time students.	units	0.38
3.8	The percentage of foreign residents among academic staff members	%	0.25
3.9	The number of international professors, lecturers, and researchers employed by the university for at least 1 semester	Number of people	3
3.10	The percentage of foreign residents (except the CIS countries) among university postgraduate students from the total number of postgraduate students, interns, residents, and assistant interns	%	7.50
3.11	The percentage of foreign residents (from the CIS countries) among university postgraduate students, interns, residents, and assistant interns of the university	%	2.32
3.12	The amount of finance obtained by the university from foreign residents and foreign corporations from R&D	thousand roubles	1990.90
3.13	The amount of finance for educational activities obtained by the university from foreign residents and foreign corporations for R&D	thousand roubles	0.00



End of table 3.4
------------------

No	Indicator title	Units of measurement	Values
	Financial and economic activity		
4.1	The funds obtained through income-generating activities per academic staff member	thousand roubles	720.61
4.2	The share of funds obtained through income-generating activities from the total income received from all sources	%	44.78
4.3	The ratio of the average salary of academic staff members at the university in comparison with the average salary in the region	%	156.16
4.4	The income of the university obtained from all sources per the number of students (normalized contingent)	thousand roubles	171.97
	Infrastructure		
5.1	Total floor space of all classrooms and laboratories per student (of the normalized contingent), in total,	m2	12.67
	including:		
5.2	owned by the university	m2	0.00
5.3	assigned to the university on the basis of operational management	m2	8.40
5.4	assigned to the university for free use	m2	4.26
5.5	rented	m2	0.00
5.6	The number of personal computers per student (of the normalized contingent)	units	0.23
5.7	The percentage of the value of machines and equipment not more than 5 years old	%	62.29
5.8	The number of copies of printed educational publications (including textbooks and study guides) from the total number of depository items registered in the library collection per student from the normalized contingent	units	237.52
	Employment		
6.1	The percentage of graduates finding employment within one calendar year after the year of graduation in the total number of graduates having completed the main academic programmes of higher education	%	80.00
	Staff		
7.1	The percentage of academic staff members with a PhD degree	%	56.03
7.2	The percentage of academic staff members with a D.Sc. degree	%	20.91
7.3	The percentage of academic staff members with a PhD or a D.Sc. degree	%	77.11
7.4	The percentage of academic staff members with a PhD or a D.Sc. degree, per 100 students	units	6.58
7.5	The percentage of regular academic staff members from the total number of academic staff members	%	86.62



# **3.5. HUMAN RESOURCES**

The high-priority areas of the human resources policy of the university are:

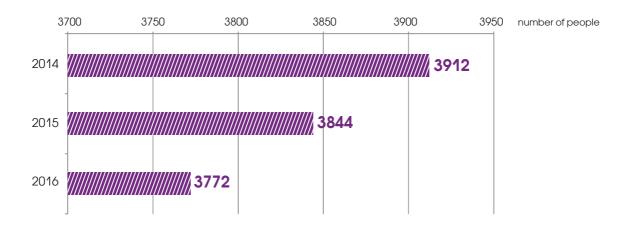
- an effective human resource policy, including improving the remuneration system, and raising the motivation and commitment levels of university employees;
- a systematic approach to renewing and enhancing the university's academic staff, aimed at supporting the educational and research initiatives;
- supporting young scholars and postgraduate students, which comprise the university's personnel reserve;
- introducing new methods and advanced training and retraining programmes for the academic staff of the university.

Key quantitative characteristics of the university's staff as of 31 December 2016 (figures 3.2, 3.3):

total number of employees	3772 people
including:	
Academic staff	1567 people
<ul> <li>Educational support personnel</li> </ul>	830 people
<ul> <li>Scientific and engineering personnel</li> </ul>	200 people
<ul> <li>Operating personnel</li> </ul>	846 people
<ul> <li>Administrative and managerial staff</li> </ul>	327 people

#### Figure 3.2

#### TOTAL NUMBER OF STAFF MEMBERS IN 2014–2016





Quantitative and qualitative indicator dynamics in the university staff composition in total in 2014–2016 is shown in Table 3.5.

Administrative and managerial

staff 327 people

#### Table 3.5

Operating personnel **846 people** 

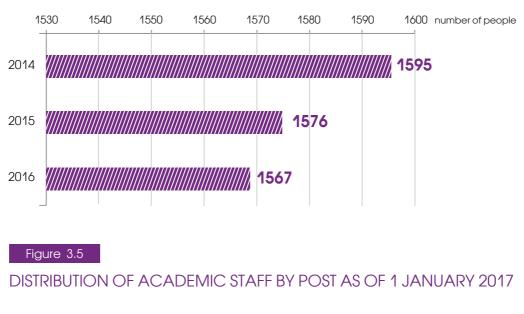
#### NUMBER AND COMPOSITION OF THE UNIVERSITY PERSONNEL IN 2014–2016

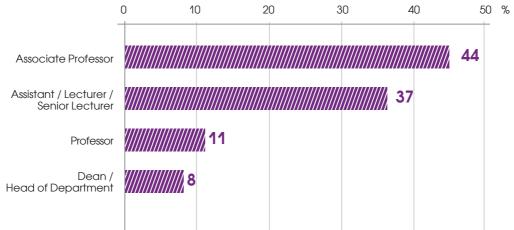
The university staff composition	2014	2015	2016
Total number of employees	3912	3844	3772
Academic Staff/faculty	1595	1576	1567
Including: total number of staff with a degree	1190	1179	1163
D.Sc.	311	303	309
PhD	879	876	854
Educational support personnel	861	868	830
Administrative and managerial personnel	340	351	327
Scientific and engineering personnel	235	197	200
Operating personnel	881	852	846

The analysis of the composition of the university staff demonstrates that 74.2% of the total number of the academic staff members have an academic degree (1163 people). There are 309 staff members with a D.Sc. degree (19.7%). The results of the academic staff numbers are shown in Figures 3.4–3.8 and in Tables 3.6–3.9.

Figure 3.4

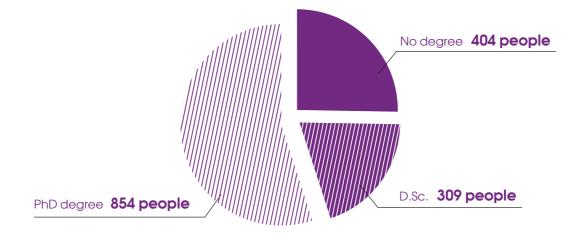
COMPARISON OF THE NUMBERS OF ACADEMIC STAFF MEMBERS IN 2014–2016







DISTRIBUTION OF ACADEMICSTAFF NUMBERS BY DEGREE



51



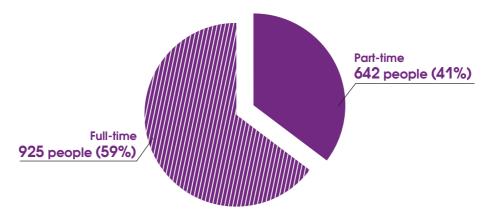
Figure 3.7

NUMBER OF ACADEMIC STAFF MEMBERS OF FACULTIES, INSTITUTES, AND UNIVERSITY-WIDE DEPARTMENTS AS OF 1 JANUARY 2017

	number of people
	0 25 50 75 100 125 150 175 200 225
The Faculty of Romance and Germanic Philology	204
The Faculty of Economics	161
The Faculty of Applied Mathematics, Informatics, and Mechanics	///////////////////////////////////////
The Faculty of Physics	///////////////////////////////////////
The Faculty of Law	///////////////////////////////////////
The Faculty of Biomedical Sciences	86
The Faculty of Geology	///////////////////////////////////////
The Faculty of Philology	69
The Faculty of History	68
The Faculty of Chemistry	66
The Faculty of Computer Sciences	///////////////////////////////////////
The Faculty of Mathematics	63
The Faculty of Philosophy and Psychology	55
The Faculty of Journalism	51
Institute of International Education	49
The Faculty of Geography, Geoecology, and Tourism	45
Department of Physical Education and Sports	44
The Faculty of Pharmaceutics	///////////////////////////////////////
The Faculty of International Relations	31
The Faculty of Military Education	28
The Department of Safety and Basic Medical Training	<b>%</b> 6
The Department of Pharmaceutics for postgraduate students	5

Figure 3.8

COMPARISON OF THE NUMBERS OF ACADEMIC STAFF MEMBERS, WORKING FULL-TIME AND PART-TIME IN 2016



#### Table 3.6

NUMBER OF ACADEMIC STAFF MEMBERS OF FACULTIES, INSTITUTES, AND UNIVERSITY-WIDE DEPARTMENTS AS OF 1 JANUARY 2017

Structural subdivision		The number of academic staff members		
	full-time	total		
The Faculty of Biomedical Sciences	62	86		
The Faculty of Geography, Geoecology, and Tourism	31	45		
The Faculty of Geology	33	70		
The Faculty of History	31	68		
The Faculty of Mathematics	39	63		
The Faculty of Military Education	26	28		
The Faculty of Journalism	24	51		
The Faculty of Computer Sciences	31	65		
The Faculty of International Relations	17	31		
The Faculty of Applied Mathematics, Informatics, and Mechanics	64	131		
The Faculty of Romance and Germanic Philology	113	204		
The Faculty of Philosophy and Psychology	34	55		
The Faculty of Pharmaceutics	24	41		
The Faculty of Physics	67	125		
The Faculty of Philology	16	69		
The Faculty of Chemistry	39	66		
The Faculty of Economics	104	161		
The Faculty of Law	72	104		
The Department of Pharmaceutics for postgraduate students	2	5		
The Department of Physical Education and Sports	42	44		
The Department of Safety and Basic Medical Training	6	6		
Institute of International Education	48	49		
Total	925	1567		



#### Table 3.7

# DISTRIBUTION OF THE ACADEMIC STAFF BY FACILITY, INCLUDING THE PERCENTAGE OF STAFF MEMBERS WITH A PHD AND DSC DEGREE

Structural subdivision	Total number of people	PhDs, %	D.Sc., %
The Faculty of Biomedical Sciences	86	64.0	23.3
The Faculty of Geography, Geoecology, and Tourism	45	60.0	20.0
The Faculty of Geology	70	67.1	21.4
The Faculty of History	68	54.4	27.9
The Faculty of Mathematics	63	61.9	25.4
The Faculty of Military Education	28	10.3	-
The Faculty of Journalism	51	66.7	13.7
The Faculty of Computer Sciences	65	49.2	21.5
The Faculty of International Relations	31	67.7	19.4
The Faculty of Applied Mathematics, Informatics, and Mechanics	131	50.4	20.6
The Faculty of Romance and Germanic Philology	204	47.5	8.3
The Faculty of Philosophy and Psychology	55	60.0	21.8
The Faculty of Pharmaceutics	41	51.2	19.5
The Faculty of Physics	125	60.8	31.2
The Faculty of Philology	69	55.1	26.1
The Faculty of Chemistry	66	50.0	42.4
The Faculty of Economics	161	56.5	19.5
The Faculty of Law	104	63.5	20.2
Department of Pharmaceutics	5	60.0	-
Department of Physical Education and Sports	44	11.4	-
Department of Safety and Basic Medical Training	6	66.7	16.7
Institute of International Education	49	53.1	2.0

#### Table 3.8

# AGE AND ACADEMIC DEGREE OF THE ACADEMIC STAFF MEMBERS

Age Degree	Total	under 35	36 to 50	51 to 70	over 70
Total:	1567	425	476	536	130
Among them:					
Have a degree of DSc	309	1	56	182	70
Have a PhD degreeк	854	225	323	256	50



#### Table 3.9

# DISTRIBUTION OF ACADEMIC STAFF MEMBERS BY STRUCTURAL SUBDIVISION BY AVERAGE AGE

	201	4	201	15	20′	16
Structural subdivision	Total number of people	Average age, years	Total number of people	Average age, years	Total number of people	Average age, years
The Faculty of Biomedical Sciences	87	49	89	49	86	49
The Faculty of Geography, Geoecology, and Tourism	45	50	46	49	45	49
The Faculty of Geology	76	48	71	48	70	49
The Faculty of History	68	50	67	49	68	49
The Faculty of Mathematics	67	51	64	51	63	52
The Faculty of Military Education	25	47	26	48	28	49
The Faculty of Journalism	50	48	52	48	51	50
The Faculty of Computer Sciences	59	45	65	45	65	46
The Faculty of International Relations	35	41	32	42	31	44
The Faculty of Applied Mathematics, Informatics, and Mechanics	117	45	125	45	131	46
The Faculty of Romance and Germanic Philology	207	44	202	44	204	45
The Faculty of Philosophy and Psychology	59	46	59	46	55	46
The Faculty of Pharmaceutics	38	46	38	47	41	47
The Faculty of Physics	133	55	126	55	125	55
The Faculty of Philology	70	50	67	51	69	50
The Faculty of Chemistry	67	51	68	51	66	52
The Faculty of Economics	156	47	154	47	161	48
The Faculty of Law	112	44	108	44	104	45
The Department of Pharmaceutics for postgraduate students	4	50	5	46	5	54
Department of Physical Education and Sports	44	45	42	46	44	46
Department of Safety and Basic Medical Training	8	51	6	51	6	52
Institute of International Education	51	47	53	47	49	48

The analysis of the age of the academic staff members in 2014–2016 demonstrates that the average age of the academic staff members in the university as a whole is:

- as of 31 December 2014, 47.5, whereas the percentage of employees at retirement age was 32.4%;
- as of 31 December 2015, 47.7, whereas the percentage of employees at retirement age was 32.0%;
- as of 31 December 2016, 48.0, whereas the percentage of employees at retirement age was 32.0%.



# **3.6. INFORMATION ON LEASES**

In 2016, there was an inventory drawn up of leasable areas, and an analysis of financial results was carried out regarding the leases. As of the beginning of the year, there was a total of 9 federal property rental contracts, 22 fee-based service contracts, and 10 public service contracts. Major lease goals for 2016 included:

- prompt cooperation with the Ministry of Education and Science of the Russian Federation and the Voronezh Regional Office of the Federal Agency for State Property Management to obtain the approval of deals for the lend-lease of the training facility premises not used in the academic process;
- searching for new lessees and advising them on issues connected with federal property rental;
- control over the proper use of non-residential properties in accordance with the contract provisions;
- enhancing lessees' financial discipline and reducing the arrears in payments; the control of monthly proceeds by means of payment reconciliation with the lessees.

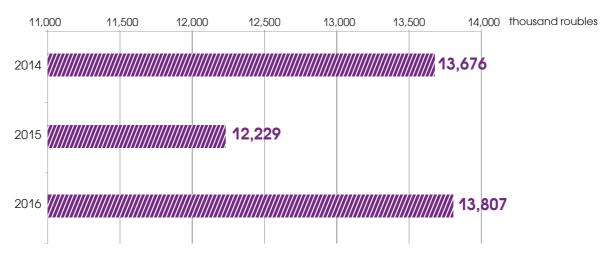
Based on the results of the Rental Department's activities in 2016, the following results were achieved:

1) total income from the leasable premises amounted to **13,807.1 thousand roubles**, including (Fig. 3.9):

- income from federal property rental contracts 1,176.1 thousand roubles;
- income from fee-based service contracts and public service contracts – 12,631.0 thousand roubles;

#### Figure 3.9

#### TOTAL INCOME FROM THE LEASABLE PREMISES





2) Documents were prepared and submitted for approval to the Ministry of Education and Science of the Russian Federation, regarding the lease of the following premises:

- on-residential premises on the 1st floor, located at 42 Kholzunova St. (University dormitory No.6); purpose of lease consumer services;
- on-residential premises on the 4th floor, located at 10 Ploshchad Lenina (University building No.2); purpose of lease – office;
- on-residential premises on the 1st floor, located at 40a Kholzunova St. (University dormitory No.6); purpose of lease grocery store.

3) The process of collaboration with small innovative businesses was optimized. As a result, a set of documents was prepared and submitted for approval to the Ministry of Education and Science of the Russian Federation, regarding the lease of premises to the following small innovative businesses:

- 31a Solnechnaya St. (training facility), 1st floor, OOO Innovation Expert Enterprise Ecotechnologies;
- 31a Solnechnaya St. (training facility), 1st floor, OOO I-Expert Group;
- 23 Gruzinskaya St., 2nd floor, OOO Tekhnologii Shmelevodstva;

4) As a result of working with lessees, financial discipline was enhanced, while the arrears in payments were reduced. Monitoring of compliance with the terms of the contracts was exercised by means of site visits and regular visits to the lessees (11 site visits were made during the year).

## **3.7. INFRASTRUCTURE DEVELOPMENT**

In 2016, using the funds allocated by the Ministry of Education and Science of the Russian Federation, as well as the university's own funds, a number of projects were implemented, aimed at enhancing the university's infrastructure and developing unique natural sites.

1. Redevelopment of Voronezh State University Botanical Garden has been carried out, including:

- a phytosanitary inspection of the trees, cataloguing the dendrological areas, as well as sanitation cutting and clearing the main collection nurseries. Following this work, cartographic documents were prepared for further development planning;
- 2.4 kilometres of metal guardrails were build along the perimeter of the Botanical Garden;
- the territory surrounding the administrative building, the garage, and the greenhouse complex, were landscaped; a parking space was created for the agricultural machinery; new asphalt covering was laid on the whole territory; garage roofs were repaired; energy-saving LED outdoor lighting was installed;
- in order to improve the working conditions of employees, the administrative building was redecorated: new windows were installed, new furniture and modern computers were purchased, a herbarium storage was created and equipped;



- new agricultural machinery with the necessary attachments has been purchased (including a chipping machine, a mowing machine, a drawbar trailer, and a scoop), and existing machinery was repaired;
- new gardening tools and protective garments were purchased for handling the collection nursery plants.

Redecoration and modernization work is currently being done in the greenhouses and other premises that had been in disrepair. The glazing of the greenhouses is being changed to energy-saving polycarbonate. Work has been started to provide gas supply to the heating system of the administrative building and the greenhouse complex.

2. There was some work done to develop the infrastructure and improve the sanitation environment at the *Venevitinovo* recreation facility:

- a three-kilometre asphalt-covered highway was built; a hard-surfaced parking place has been set up;
- a playground and a sports ground were built, equipped with sports facilities, such as a football pitch, tennis tables, basketball backboards, volleyball poles, and a set of exercise machines;
- a beach and a boat pier were equipped, and the bottom of the Usmanka river was cleaned;
- the houses were redecorated, and the inside and outside lighting systems were repaired;
- biological treatment plants were built;
- a chain-link fence was installed along the perimeter.

3. In June 2016, university students first has their internship training at the *Nickel* training and education centre in the Nickel village of the Maikop district (the Republic of Adygeya). The training centre was established in a unique natural environment: mid-mountain landscape, alpine meadows, potholes and coves, unique geology and various wildlife, close proximity to the Caucasus Biosphere Reserve, the cleanest air and water, hot springs, waterfalls, historical monuments, diverse culture and traditions of the multinational population. Therefore, this training base may be used for the educational process in a variety of fields, including geography and tourism, biology and soil studies, geology, history and archaeology, ethnography, and philology.

At present, the base has all the necessary conditions for field training. The facilities include 11 residential portacabins equipped with basic furniture, as well as 2 portaloos. The premises are electrified and have an uninterrupted water supply.

In their leisure time, the students are provided opportunities to do summer sports.

The premises of the base can house up to 60 students and teachers at the same time.



## 3.8. BRIEF SUMMARY OF THE MAIN ACHIEVEMENTS IN 2016

1. VSU's Strategic Development Programme for 2012–2016 has been completed. The Strategic Development Programme has brought the university:

- a modernized infrastructure, including purchasing state-of-the-art training and laboratory equipment worth over 160 million roubles, as well as major repair works in the university buildings (78.4 thousand square metres) and dormitories (16.6 thousand square metres);
- a reformed university governance, including the implementation of the projecttarget approach (annual VSU Project Map) and an electronic document flow system (the *Thesis* system).

2. As far as the international rankings are concerned, the university:

- was first included in the Times Higher Education (THE) World university Rankings, the 801+ group, and was adjudged one of the 400 best European universities, according to Times Higher Education Best Universities;
- passed an international audit to determine compliance with the criteria of the Quacquarelli Symonds (QS) STARS ranking, and got "three stars" in total (and "five stars" in Education, Internationalization, and Innovations);
- improved its position in the UI GreenMetric ecological ranking, from 336 to 144, thus becoming second among Russian universities.

3. The university also successfully passed the second monitoring of effectiveness of higher education institutions held by the Ministry of Education and Science. 7 out of 7 criteria have been met, exceeding the threshold values of total research projects and developments per faculty member, as well as the percentage of staff with PhD per 100 students.

4. Large-scale projects were implemented, including:

- the development of the infrastructure of unique natural sites the Galichya Gora nature reserve, VSU's Botanical Garden, and the Venevitinovo Educational and Research Biocentre;
- establishing Nickel a unique interdepartmental field training base in the Adygeya republic.

59



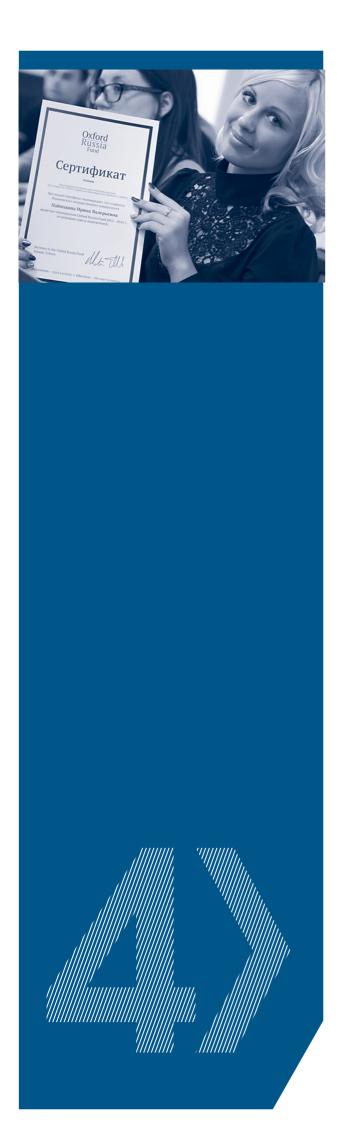












# **EDUCATION**



# EDUCATION



E. E. Chupandina, First Vice-Rector – Vice Rector for Academic Affairs

#### 4.1. MAIN OBJECTIVES OF THE ACADEMIC POLICY IN 2016

The University's main aim in the field of the academic policy in 2016 was to ensure the compliance of the quality of education and the structure of higher and further education programmes with the requirements of the modern, innovative, socially oriented development of the Voronezh region and Russia.

In order to achieve this aim the following objectives were set:

- Stable anticipatory training of highly qualified professionals and academic staff based on customized educational paths and project-based learning techniques.
- 2. Modernisation of the existing educational programmes according to professional standards.
- **3.** Accreditation of the specialities from the enlarged group of specialities "Fundamental Medicine".
- 4. Licensing of new programmes and specialities.
- The introduction of independent quality assessment for higher education programmes by means of the mechanisms of public and professional accreditation of educational programmes.



### 4.2. GENERAL INFORMATION ABOUT THE MAIN STEPS AND TECHNIQUES OF THE PRE-UNIVERSITY WORK

#### MAIN OBJECTIVES OF THE PRE-UNIVERSITY WORK IN 2016

- **1.** Organisation of the networking cooperation with secondary educational institutions in Voronezh, the Voronezh region, and nearby regions.
- 2. Elaboration of the system of events to identify, attract, and support talented young people.
- 3. Promotion of the assistance rendered to students of educational institutions, colleges, technical schools, further education centres and institutions, private schools, non-state educational institutions, and career guidance centres in the field of career guidance.
- 4. Provision of multi-channel information support to prospective students concerning the University admission.
- 5. Continuation of the consistent and comprehensive pre-university work with schoolchildren of different age groups.
- 6. Development of further cooperation with student activists and the VSU Volunteer Club.

#### MAIN ACHIEVENTS WITHIN THE AREAS OF FOCUS

COLLABORATION WITH EDUCATIONAL INSTITUTIONS AND DEPARTMENTS OF EDUCATION IN VORONEZH AND MUNICIPAL DISTRICTS OF THE VORONEZH REGION

- Constant communication via email with educational institutions in Voronezh (145 schools), Voronezh Region (172 schools), Lipetsk Region (17 schools), Orel Region (4 schools), and Tambov Region (4 schools).
- Communication via email with teachers (141 people), parents (47 people), heads of school libraries (5 people), heads of school scientific societies formed in educational institutions and establishments of further education in Voronezh and the Voronezh region (35 societies), and authorised representatives from seven municipal districts of the Voronezh region.
- Collaboration with the Department of Education, Science, and Youth Policy of the Voronezh region and the Department of Education and Youth Policy of the Voronezh government. In the reporting period, seven events were held in collaboration with education departments of Voronezh and 33 events in collaboration with the heads of municipal districts of the Voronezh region.





- Regular update of the information at VSU stands in 15 Voronezh schools.
- Organisation of over 50 tours of the University, its faculties, museums, and the library for schoolchildren.
- Regular participation of the admission board representatives and vice-deans for the pre-university work in teacher-parent meetings at schools, collaborative events, and school scientific societies as well as promotion of the networking cooperation with schools by the participation in extracurricular school events and with the help of supervisors, students who are employed by schools, and University academic staff members who teach elective courses to schoolchildren.
- Active development of the new field of cooperation with schools by attracting schoolchildren to volunteer for VSU events.

# EVENTS AIMED AT THE IDENTIFICATION, ATTRACTION, AND SUPPORT OF TALENTED YOUNG PEOPLE

#### ACADEMIC COMPETITIONS

Traditionally, considerable attention in the field of the pre-university work was given to academic competitions which served as a platform for the identification, attraction, and support of the most talented children.

The following all-Russian academic competitions were held in 2016:

- A multidisciplinary engineering academic competition among schoolchildren called "Star" organised by the Russian Engineering Union and the Ministry of Education and Science of the Russian Federation. The final stage of the competition included the following disciplines: Machine Building (1 participant), Russian (427 participants), Natural Sciences (347 participants), History (118 participants), and Social Studies (276 participants).
- The final stage of Moscow Academic Competition in Chemistry (13 participants).
- The final stage of Saint-Petersburg Online Academic Competition in Physics (36 participants).



A great number of academic competitions were held at VSU in the majority of disciplines taught at the University:

- The Academic Competition in Informatics as a part of the Information Technologies Marathon (February 2016, 110 participants).
- The Project Contest as a part of the Information Technologies Marathon (March 2016, 60 participants).
- Team contests as a part of the Information Technologies Marathon (March 2016, 150 participants).
- The virtual stage of the Academic Competition in Informatics for Schoolchildren (February 2016, 280 participants).
- The Academic Competition in Journalism "Admission Score" (March 2016, 45 participants).
- Professor M. A. Levitskaya Open Academic Competition in Physics (September 2016, 500 participants including 140 9-form students, 180 10-form students, and 180 11-form students).

#### TOURNAMENTS

In 2016, the University organised and co-organised 14 tournaments for schoolchildren. Over 250 talented children took part in these tournaments. The All-Russian Tournament of Young Naturalists (May 2016, 100 participants) and the New Year Tournament (January 2016, 25 participants) were among the most important competitions. The following tournaments were held in collaboration with the Regional Centre for Students Technical Projects: the Siberian Tournament of Young Physicists (January 2016, 3 participants), the Belarusian Tournament of Young Physicists (February 2016, 7 participants), the All-Russian Tournament of Young Physicists (March 2016, 13 participants), the Summer Conference "Project Work in Natural Sciences" (June-July 2016, 5 participants, held in collaboration with the Department of Education, Science, and Youth Policy of the Voronezh Region), the International Tournament of Young Naturalists (July 2016, 6 participants), Voronezh Tournament School (August 2016, held in collaboration with the recreation boarding house for talented children "Repnoye"), the III Interregional Tournament in Chemistry for Schoolchildren (October 2016, 40 participants), the RegionalTournament of Young Physicists (November 2016, 80 participants), and the session "Golden Section" organised in the recreation boarding house "Repnoye" for schoolchildren from forms 8-11 studying at educational institutions of Voronezh and the Voronezh region (November-December 2016, 70 schoolchildren who had participated in the tournaments of young physicists, chemists, and naturalists).

Most of VSU's faculties continued to run schools of young experts including the School of Young Journalists, the School of Young Culture Experts, the School of Young Experts in International Relations, the Psychological and Pedagogical Club for Schoolchildren, the School of Young Psychologists, the School of Young Pharmaceutists, the Latin Language School, the School of Young Philologists, the School of Young Chemists, the Saturday Language School, the Summer Language School, the Saturday Mathematics School, the Summer Mathematics School, the Mathematics Correspondence School, the Physics Correspondence School, and the School for Teenagers (the Faculty of Economics).



#### STUDENT SCIENTIFIC SOCIETY

The Student Scientific Society is one of the platforms to search for talented schoolchildren and encourage their interest in research.

In 2016, VSU hosted the XXXI Conference of the Student Scientific Society. The conference had 24 sections and 103 subsections which were participated in by over 2,500 schoolchildren from forms 2–11, about 300 teachers, more than 100 parents, and 300 University lecturers, postgraduate and undergraduate students. The participants of the conference represented 289 educational institutions of Voronezh, almost all districts of the Voronezh region including villages, Lipetsk and the Lipetsk, Orel, Belgorod, Moscow, and Volgograd regions.

#### "ROBOART" FESTIVAL

The Interregional Festival of Robotics "ROBOART" is an annual VSU event for schoolchildren and students.

"ROBOART" is the biggest robotics festival in the Central Black Earth Region and one of the biggest festivals in Russia. Over one thousand schoolchildren and students took part in the festival in 2016. The event was attended by ten thousand people. The participants and guests of the event represented 15 Russian regions.

The festival was supported by the leading IT companies including MAIL.RU, ATOS, T-Systems, DSR, DataArt, Wizart Animation, NetCraker, RET, ENFORS, RELEKS, and others.

#### INFORMATION SUPPORT OF THE UNIVERSITY ADMISSION

Articles dedicated to questions concerning the University admission process and studies were published in online mass media, regional mass media, "Voronezhskiy universitet" newspaper, and in the reference guide for University entrants "Shans". Online consultations of prospective students on the questions of the University admission process were carried out daily on the official VSU website, in social networks, and via email.



#### CAREER GUIDANCE

Three University-wide open days were held in February, April, and October 2016. An open day for prospective master's degree students took place in May 2016. 16 off-site open days were organised in Voronezh, Lipetsk, and Orel regions. The events were attended by over five thousand people.

Within the scope of its pre-university work, VSU actively participates in various exhibitions. In April 2016, the University delegation headed by the Rector took part in the Moscow International Education Fair. In December 2016, VSU also participated in the Second Forum of Talented Children of the Voronezh Region.

The University held the following career guidance events:

- **1.** Open career guidance lessons were organised for students of Voronezh educational institutions at all VSU's faculties.
- 2. University scientists gave open popular-science lectures around the city in various locations (museums, libraries, Amital bookshop, and Petrovskiy book club).
- Academic staff members of VSU Sciences Faculties delivered lectures at the Faculty of Chemistry within the framework of the project "Saturday University". In 2016, academic staff members of the Faculties of Chemistry, Pharmaceutics, Biomedical Sciences, and Physics gave 22 lectures.
- 4. 20 lectures for schoolchildren were delivered within the framework of the project "Saturday University".
- 5. Computer-based testing of schoolchildren was organised at the VSU Testing Centre within the programme "Proforientator" in collaboration with the Centre of Testing and Development "Humanitarian Technologies", Moscow. The number of people tested amounted to 74.



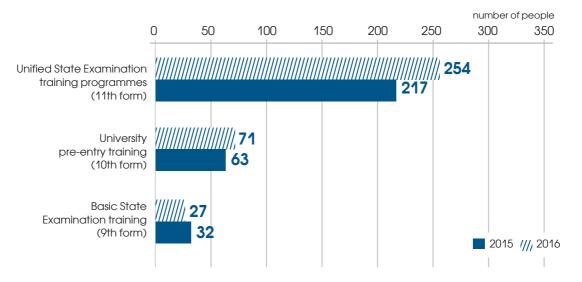


#### PRE-UNIVERSITY EDUCATION (PRE-STUDY COURSES AND ADDITIONAL GENERAL DEVELOPMENT PROGRAMMES)

In 2016, 340 students took fee-paying pre-study courses within additional general development programmes aimed at improving the level of proficiency in general subjects and university pre-entry training (Figure 4.1).

#### Figure 4.1

#### FREQUENCY DISTRIBUTION OF STUDENTS ACCORDING TO THE PROGRAMMES OF PRE-STUDY COURSES IN 2015 AND 2016



In September 2014, the programme "Preparation for the Final Essay" was opened for 11th form students. In 2016, the programme was completed by 23 students.

In the reporting period, pre-study courses continued to offer training within the programme "Remote Training for the Unified State Examination" which is comprised of a series of e-courses. The programme was completed by 16 students.

The University takes part in the programme of the Ministry of Education and Science of the Russian Federation which provides particular groups of students with funding from the federal budget to take pre-study courses. 6 students completed their pre-study training in accordance with the Order of the Ministry of Education and Science of the Russian Federation dated 15 April 2014, No 323 "On the Approval of the Lists of Federal State Educational Organisations whose Pre-Study Divisions Provide Training Funded from the Federal Budget for the Academic Years 2014/15 and 2015/16".



In 2016, pre-study courses continued to conduct mock Unified State Examinations (USEs), which were followed by consultations on the examination results held by USE expert lecturers. 19 examinations taken by over 1,400 students were conducted overall.

The analysis of USE results for the graduates of pre-study courses as well as their enrolment results allowed a qualitative assessment of the training provided at the courses (Tables 4.1 and 4.2).

#### Table 4.1

# AVERAGE SCORE IN THE UNIFIED STATE EXAMINATION FOR THE GRADUATES OF PRE-STUDY COURSES IN 2016

Discipline	Average score in the Russian Federation	Average score in the Voronezh region	Average score for the graduates of VSU pre- study courses
Russian Language	64.3	66.48	81.65
Mathematics	51.9	47.53	62.6
Biology	52.8	52.47	62.46
Geography	49.6	49.01	67.45
Foreign Language (English)	64.2	70.63	77.19
Informatics and ICT	53.0	55.92	69.27
History	48.1	53.64	61.6
Literature	58.4	64.66	72.15
Social Studies	59.5	53.37	62.72
Physics	51.2	49.29	59.8
Chemistry	56.1	58.22	57.67

Table 4.2

#### ENROLMENT RESULTS DEMONSTRATED BY THE GRADUATES OF PRE-STUDY COURSES

Indicator	2015	2016
Number of graduates:	217	254
enrolled at VSU	124	148
enrolled at other higher educational institutions in Voronezh	72	84
enrolled at higher educational institutions in other cities	4	7
Results of enrolment at higher educational institutions:		
total number of students enrolled at higher educational institutions	200	239
percentage wise	92.2	94



## 4.3. MAIN RESULTS OF THE 2016 ADMISSIONS CAMPAIGN

In 2016, following the results of an open competition Voronezh State University was allocated 2,558 state-funded places for bachelor's, diploma, and master's degree programmes, which became a record figure in the University's history. In particular, the number of state-funded places for master's degree programmes broke the record of the previous year (889 places in comparison with 812 places in 2015).

Despite some unsettling estimates preconditioned by the fact that 2016 did not see the simultaneous graduation of bachelor's and diploma degree students the admission to fee-paying places for master's degree programmes was a record-high as well (1,009 students in comparison with 786 in 2015). The diagrams below show the admission of first-year students in 2016 according to degree levels, modes of study, and forms of financing.

Figure 4.2 demonstrates that Jurisprudence and Economics remained the priority specialities for the graduates of secondary schools and institutions of secondary vocational education. Moreover, prospective students were not discouraged by a constant decrease in the number of state-funded places within these specialities. Most of them were willing to study on a fee-paying basis. The diagram also shows a record-high increase in the number of University entrants in 2016 at the Faculty of Romance and Germanic Philology, primarily within the programme "Linguistics". This situation resulted from two factors: firstly, a sharp rise in the admission score for state-funded places (from 248 in 2015 to 261 in 2016), and secondly, the fast growth of students studying on a feepaying basis.

Figure 4.2

#### DISTRIBUTION OF FULL-TIME FIRST-YEAR STUDENTS ACCORDING TO PROGRAMMES AND SPECIALITIES

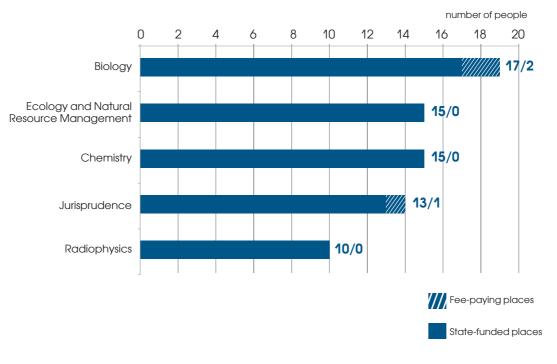
number of pe
e-navina places
ee-paying places
tate-funded place



In 2016, the admission results for first-year students enrolled on bachelor's and diploma degree programmes within part-time and extramural modes of study were not so impressive. It must be admitted that prospective students often choose these modes of study residually, which leads to their low academic performance and a high rate of expulsion in the future. Due to the abovementioned circumstances, the number of VSU's faculties which employ these modes of study reduces every year. This process complies with the policy of the Ministry of Education and Science of the Russian Federation aimed at the reduction of students who are studying for their first degree within the extramural mode of study.

#### Figure 4.3

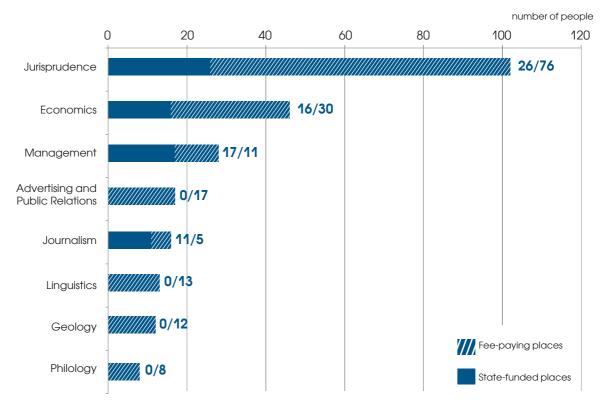
# NUMBER OF PART-TIME STUDENTS ENROLLED ON BACHELOR'S DEGREE PROGRAMMES





#### Figure 4.4

#### NUMBER OF EXTRAMURAL STUDENTS ENROLLED ON BACHELOR'S DEGREE PROGRAMMES



Jurisprudence and Economics took the leading positions not only among bachelor's degree programmes but also among full-time master's degree programmes. It is remarkable that there were a great number of students enrolled on master's degree programmes in the field of information technologies. Graduates of the Faculty of Applied Mathematics, Informatics, and Mechanics and the Faculty of Computer Sciences do not usually experience any problems with the future employment. However, many of them think that it is sensible to continue their studies at a higher level after having completed the bachelor's degree (Figure 4.5).

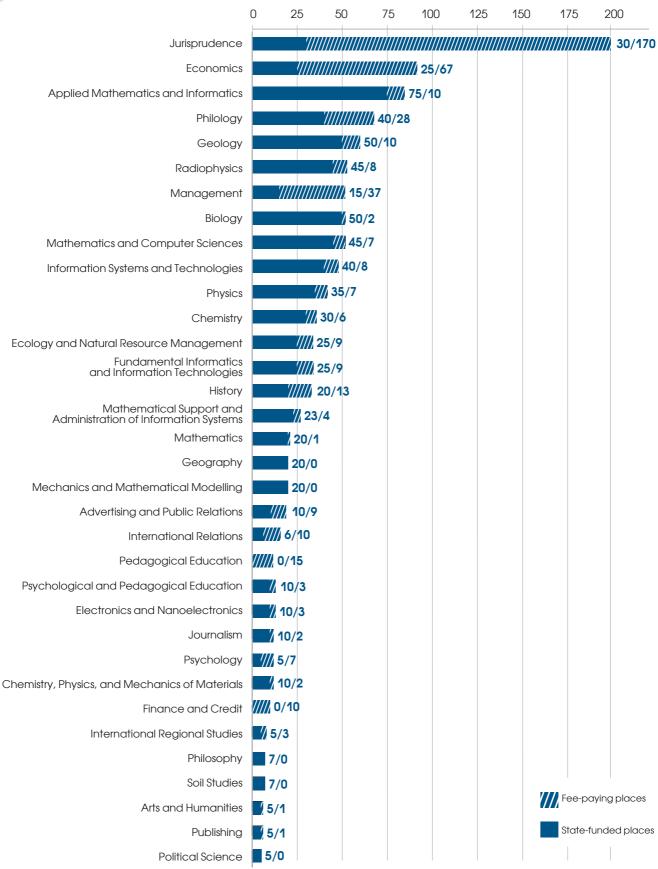
73



#### Figure 4.5

#### NUMBER OF FULL-TIME FIRST-YEAR STUDENTS ENROLLED ON MASTER'S DEGREE PROGRAMMES IN 2016

number of people





Widespread acceptance of part-time and extramural modes of study within master's degree programmes appears quite reasonable and efficient in comparison with bachelor's and diploma degree programmes. In addition, it is very often the case that students are studying for the second degree in another field, which is necessary to upgrade their professional skills. Due to this fact, VSU has been actively developing corporate master's degree programmes over recent years in collaboration with leading regional companies (Figures 4.6 and 4.7).

#### Figure 4.6

#### NUMBER OF EXTRAMURAL STUDENTS ENROLLED ON MASTER'S DEGREE PROGRAMMES IN 2016

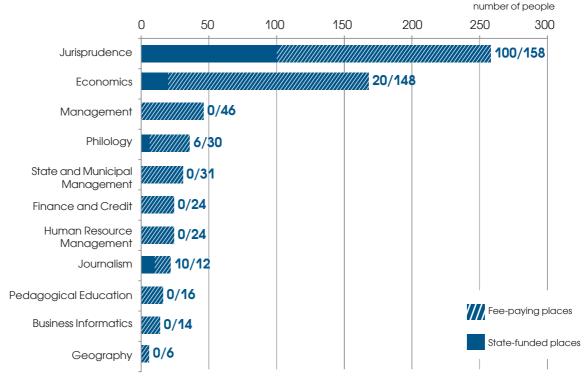
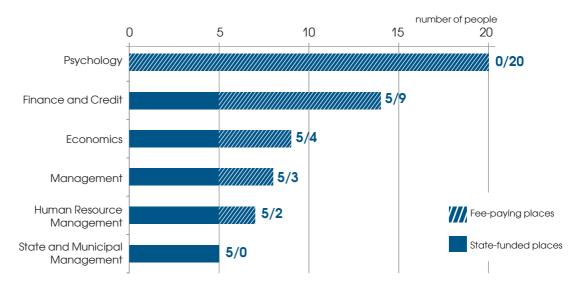


Figure 4.7

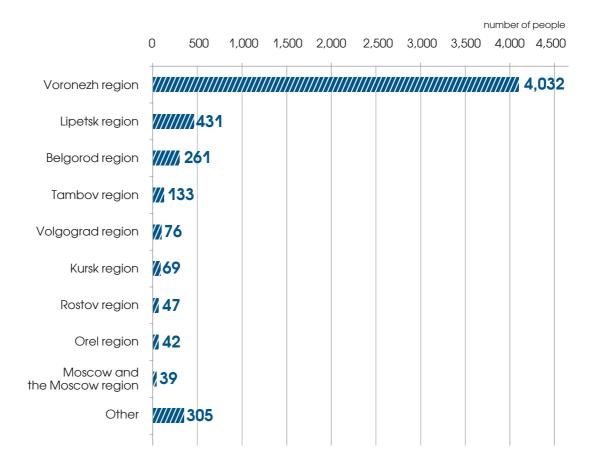
#### NUMBER OF PART-TIME STUDENTS ENROLLED ON MASTER'S DEGREE PROGRAMMES IN 2016





In 2016, applicants from over 70 subjects of the Russian Federation filed their documents with VSU. Representatives of 67 Russian regions were enrolled (Figure 4.8).

# Figure 4.8 DISTRIBUTION OF FIRST-YEAR STUDENTS ACCORDING TO REGIONS



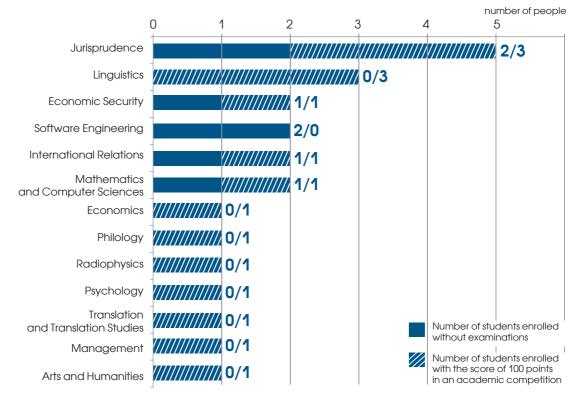
Obviously, the increase in the number of University entrants from Moscow and the Moscow region was directly connected with the successful participation of the VSU delegation in the Moscow International Education Fair in April 2016.



In 2016, VSU enrolled 23 winners and awardees of academic competitions held among schoolchildren. Figure 4.9 shows programmes and specialities which they were enrolled on. The figure demonstrates that the Faculty of Law (5 people enrolled), the Faculty of Economics (4 people enrolled), and the Faculty of Romance and Germanic Philology (3 people enrolled) attracted the greatest number of talented school leavers, which correlates with the general distribution of University entrants among faculties.

#### Figure 4.9

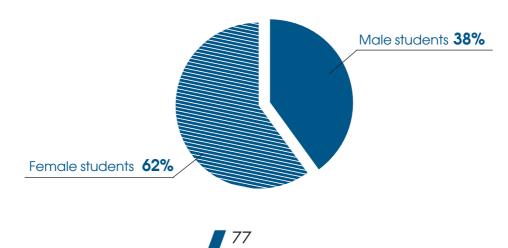
### DISTRIBUTION OF THE ACADEMIC COMPETITION WINNERS AND AWARDEES ENROLLED AT VSU IN 2016 ACCORDING TO EDUCATIONAL PROGRAMMES



The gender composition of first-year students enrolled at VSU remained the same: almost two thirds of University entrants were female. This is apparently connected with the relatively large number of humanitarian faculties in the University's structure (Figure 4.10).

#### Figure 4.10

#### GENDER COMPOSITION OF FIRST-YEAR STUDENTS IN 2016





#### 4.4. GENERAL INFORMATION ABOUT THE ACADEMIC PROGRAMMES IMPLEMENTED AT VSU IN 2016

In 2016, the aggregate (normalized) contingent of students within academic programmes totalled over 14 thousand including 9,816 bachelor's degree students, 1,279 diploma degree students, 2,288 master's degree students, and 590 postgraduate students. In the reporting period, the number of master's degree students and postgraduate students in the normalized contingent amounted to 20%, which is typical for leading Russian universities.

In 2016, VSU implemented 149 master's degree programmes within 43 specialities (Table 4.3).

#### Table 4.3

# MASTER'S DEGREE PROGRAMMES IMPLEMENTED AT VSU IN 2016

Specialities Programmes

•	<u> </u>
TH	HE FACULTY OF BIOMEDICAL SCIENCES
06.04.01 – Biology	Biodiversity Biophysics Biochemistry Botany Genetics Biomedical Sciences Human and Animal Physiology Ecology
05.04.06 – Ecology and Natural Resource Management	Ecological Management Ecological Safety
THE FACULTY	OF GEOGRAPHY, GEOECOLOGY, AND TOURISM
05.04.02 – Geography	Landscape Studies and Landscape Design Social and Economic Geography
05.04.06 – Ecology and Natural Resource Management	Ecological Monitoring and Audit Ecological Monitoring and Radiation Safety Natural Resource Management
43.04.02 – Tourism	General Theory of Tourism and Tourist Industry
	THE FACULTY OF GEOLOGY
05.94.01 – Geology	Geological Surveying in Orogens Geological Surveying and Mineral Deposit Exploration in Platform Regions Geological Engineering Oil and Gas Geophysics Regional Geology Ecological Management
	THE FACULTY OF JOURNALISM
42.04.02 – Journalism	Advertising and Public Relations Internet and Mass Media TV and Radio Functioning Process
42.04.01 – Advertising and Public Relations	Advertising and Public Relations in Mass Media Advertising and Public Relations in Tourism
	THE FACULTY OF HISTORY
46.04.01 – History	Archaeology Russian History Modern and Contemporary History of Europe and North America



Table cont. 4.3

<b>En o si a lititi o s</b>	
Specialities	Programmes
41.04.04 – Political Science	Contemporary Political Science: Scientific Research and Teaching Management, Analytical and Expert Activity
	THE FACULTY OF COMPUTER SCIENCES
02.04.01 – Mathematics and Computer Sciences	Computer Mathematics Computer Modelling and Artificial Intelligence Informatics (Computer Sciences) as a Second Competence
09.04.02 – Information Systems and Technologies	Information Systems Analysis and Synthesis Information Systems Security Informatics as a Second Competence Information Technologies in Management Communication Technologies Information Systems Design Technologies
	THE FACULTY OF MATHEMATICS
01.04.01 – Mathematics	Mathematical modelling Computational mathematics and informatics Differential Equations, Dynamical Systems, and Optimal Control Substantial, Complex, and Functional Analysis
02.04.01 – Mathematics and Computer Sciences	Mathematical and Computer Modelling Mathematical Basis for Computer Sciences Mathematical Analysis and its Applications Mathematical Methods in Economics and Finance Mathematical Methods and Computer Technologies in Medicine
THE	FACULTY OF INTERNATIONAL RELATIONS
41.04.05 – International Relations	International Human Rights Protection International Integration and International Organisations
41.04.01 – International Regional Studies	European Studies
38.04.02 – Management	International Business Customs Services Management
38.04.01 – Economics	Business in the Emerging Markets
THE FACULTY OF A	PPLIED MATHEMATICS, INFORMATICS, AND MECHANICS
02.04.02 – Fundamental Informatics and Information Technologies	Intelligent Information Technologies Computer Sciences Mobile Application Programming Parallel Programming and Concurrent Computing Management Information Systems
01.04.02 – Applied Mathematics and Informatics	Operations Research and System Analysis Mathematical Basis for Computer Graphics Mathematical and Information Support in Economic Activity Mathematical and Software Support for ECM Mathematical Modelling Optimisation and Optimal Control Parallel Programming and Distributed Computing Numerical Methods
02.04.03 – Mathematical Support and Administration of Information Systems	Information Technologies
01.04.03 – Mechanics and Mathematical Modelling	Applied Mechanics and Computer Modelling





Specialities	Programmes
38.04.05 – Business Informatics	Information Business Analytics
THE FACUL	TY OF ROMANCE AND GERMANIC PHILOLOGY
45.04.01 – Philology	Business Communication in Economics: German International Business Communication General Linguistics: Psycholinguistics, Sociolinguistics, and Speech Studies Translation Studies and Practice Romance Philology
44.04.01 – Pedagogical Education	Foreign Language Teaching with the Application of Online Technologies
	THE FACULTY OF PHYSICS
03.04.02 – Physics	Nuclear and Elementary Particle Physics Atomic and Molecular Physics Physics of Ferroelectrics and Dielectrics Physics of Nanosystems Semiconductor Physics and Microelectronics Optics of Nanostructured Materials Medical Physics Optics and Nanophotonics
03.04.03 – Radiophysics	Statistical Radiophysics Computer Methods of Radiophysical Information Processing Computer Radiophysics Information Systems and Processes Microelectronics and Semiconductor Devices
11.04.04 – Electronics and Nanoelectronics	Integrated Electronics and Nanoelectronics Nanotechnologies in Electronics
	THE FACULTY OF PHYLOLOGY
45.04.01 – Philology	Cultural Aspects of Russian Literature Russian Literature in Cultural and Pedagogical Aspects Russian Literature in the European Context Russian Language for International Students Text and Communication Philological Support for International Relations
50.04.01 – Arts and Humanities	Contemporary Arts and Crafts
42.04.03 – Publishing	Advertising, Printed and Electronic Publications
THE FA	CULTY OF PHILOSOPHY AND PSYCHOLOGY
47.04.01 – Philosophy	Ontology and Epistemology
37.04.01 – Psychology	Psychology of Personality Social Psychology
51.04.01 – Cultural Studies	Social and Cultural Management
44.04.02 – Psychological and Pedagogical Education	Educational Psychology Psychology and Pedagogy of Creative Activity



End of table 4.3

Specialities	Programmes					
	THE FACULTY OF CHEMISTRY					
04.04.01 – Chemistry	Analytical Chemistry Inorganic Chemistry Organic Chemistry Physical Chemistry Environmental Chemistry, Chemical Expertise, and Ecoanalytical Chemistry Chemistry of Natural Compounds Electrochemistry					
04.04.02 – Chemistry, Physics, and Mechanics of Materials	Chemistry, Physics, and Mechanics of Function Materials					
	THE FACULTY OF ECONOMICS					
38.04.01 – Economics	Quantitative Analysis of Financial Markets Corporate Accounting, Financial and Investment Analysis International Audit Accounting, Analysis, and Audit Financial Analyst: Investments, Credit Standing, and Risks Economics and E-Commerce Economics of Organisations and Markets Labour Economics Economics of the Firm					
38.04.02 – Management	Accounting and Audit General and Strategic Management Marketing Management Economics and Management of the Firm					
38.04.08 – Finance and Credit	Financial Management Banks and Banking					
38.04.04 – State and Municipal administration	Administration of the Territory's Social and Economic Development					
38.04.03 – Human Resource Management	Human Resource Management Human Resource Management in International Business					
	THE FACULTY OF LAW					
40.04.01 – Jurisprudence	State and Municipal Management Contract Law Protection of Human Rights and Freedoms Protection of Social and Labour Rights Environmental and Land Law Commercial Organisations in Civil Circulation International and European Law International Law and Business Taxation and Civil Legislation Organisation of Judicial Power and Law Enforcement Activities Implementation of Constitutional Legislation in Social and Economic Areas Judicial and Non-Judicial Forms of Civil Rights Protection Theory and History of State and Law Criminal Law, Criminology, and Correctional Law Criminal Procedure, Criminalistics, and Operational Investigations Financial and Tax Law					



## TRAINING THE TOP-QUALIFIED ACADEMIC STAFF – POSTGRADUATE DEGREE COURSES AND INTERNSHIP

In 2016, VSU postgraduate students were trained within 17 research areas and 82 fields of study (Table 4.4).

The University implemented three internship programmes: Management and Economics of Pharmacy, Pharmaceutical Engineering, and Pharmaceutical Chemistry and Pharmacognosy. In 2016, there were 65 state-funded interns and 39 fee-paying interns.

#### Table 4.4

### RESEARCH AREAS AND PROGRAMMES (FIELDS OF STUDY) IMPLEMENTED AT VSU WITHIN POSTRADUATE DEGREE COURSES IN 2016

Research areas Programmes (fields of study)							
1	HE FACULTY OF BIOMEDICAL SCIENCES						
06.06.01 – Biological Sciences	03.01.02 – Biophysics 03.01.04 – Biochemistry 03.01.05 – Phytophysiology and Phytochemistry 03.02.01 – Botany 03.02.04 – Zoology 03.02.05 – Entomology 03.02.07 – Genetics 03.02.08 – Ecology 03.02.13 – Soil Studies						
THE FACULI	Y OF GEOGRAPHY, GEOECOLOGY, AND TOURISM						
05.06.01 – Geosciences	25.00.23 – Physical Geography and Biogeography, Soil Geography and Landscape Geochemistry 25.00.24 – Economic, Social, Political, and Recreational Geography 25.00.36 – Geoecology						
	THE FACULTY OF GEOLOGY						
05.06.01 – Geosciences	<ul> <li>25.00.01 - General and Regional Geology</li> <li>25.00.02 - Palaeontology and Stratigraphy</li> <li>25.00.04 - Petrology and Volcanology</li> <li>25.00.06 - Lithology</li> <li>25.00.07 - Hydrogeology</li> <li>25.00.08 - Geological Engineering, Permafrostology, and Soil Science</li> <li>25.00.10 - Geophysics and Geophysical Methods in Mineral Deposit Exploration</li> <li>25.00.11 - Geology, Solid Mineral Deposit Exploration, and Minerageny</li> <li>25.00.36 - Geoecology</li> </ul>						
	THE FACULTY OF JOURNALISM						
45.06.01 – Linguistics and Literary Studies	10.01.10 – Journalism						
	THE FACULTY OF HISTORY						
41.06.01 – Political Sciences and Regional Studies	23.00.02 – Political Institutions, Processes, and Technologies						



Table cont. 4.4

Research areas	Programmes (fields of study)
46.06.01 – Historical Sciences and Archaeology	07.00.02 – Russian History 07.00.03 – General History (Modern and Contemporary History) 07.00.03 – General History (Ancient World) 07.00.06 – Archaeology 07.00.09 – Historiography, Source Studies, and Methods of Historical Research
	THE FACULTY OF COMPUTER SCIENCES
09.06.01 – Informatics and Computer Facilities	05.13.01 – System Analysis, Management, and Processing of Information
	THE FACULTY OF MATHEMATICS
01.06.01 – Mathematics and Mechanics	01.01.01 – Substantial, Complex, and Functional Analysis 01.01.02 – Differential Equations, Dynamical Systems, and Optimal Control
09.06.01 – Informatics and Computer Facilities	05.13.18 – Mathematical Modelling, Numerical Methods, and Programme Systems
THE FACULTY OF A	APPLIED MATHEMATICS, INFORMATICS, AND MECHANICS
01.06.01 – Mathematics and Mechanics	01.02.04 – Solid Mechanics
09.06.01 – Informatics and Computer Facilities	05.13.10 – Management in Social and Economic Systems 05.13.17 – Theory of Informatics
THE FACU	JLTY OF ROMANCE AND GERMANIC PHILOLOGY
45.06.01 – Linguistics and Literary Studies	10.02.04 – Germanic Languages 10.02.05 – Romance Languages 10.02.19 – Linguistic Theory
	THE FACULTY OF PHYSICS
03.06.01 – Physics and Astronomy	01.04.02 – Theoretical Physics 01.04.03 – Radiophysics 01.04.05 – Optics 01.04.07 – Condensed Matter Physics 01.04.10 – Semiconductor Physics
11.06.01 – Electronics, Radioengineering, and Communication Systems	05.27.01 – Solid-State Electronics, Radioelectronic Components, Microelectronics, Nanoelectronics, and Quantum Effect Devices
	THE FACULTY OF PHARMACEUTICS
33.06.01 – Pharmacy	14.03.06 – Pharmacology and Clinical Pharmacology 14.04.02 – Pharmaceutical Chemistry and Pharmacognosy 14.04.03 – Pharmacy Business Organisation
	THE FACULTY OF PHYLOLOGY
45.06.01 – Linguistics and Literary Studies	10.01.01 – Russian Literature 10.01.03 – International Literature 10.02.01 – Russian Language 10.02.03 – Slavic Languages 10.02.19 – Linguistic Theory



Research areas	Programmes (fields of study)
THE F	ACULTY OF PHILOSOPHY AND PSYCHOLOGY
37.06.01 – Psychological Sciences	19.00.05 – Social Psychology 19.00.07 – Pedagogical Psychology
44.06.01 – Education and Pedagogical Sciences	13.00.01 – General Pedagogics, History of Pedagogics and Education
47.06.01 – Philosophy, Ethics, and Religious Studies	09.00.01 – Ontology and Epistemology 09.00.05 – Ethics 09.00.11 – Social Philosophy
51.06.01 – Cultural Studies	24.00.01 – Theory and History of Culture
	THE FACULTY OF CHEMISTRY
04.06.01 – Chemical Sciences	02.00.01 – Inorganic Chemistry 02.00.02 – Analytical Chemistry 02.00.03 – Organic Chemistry 02.00.04 – Physical Chemistry 02.00.05 – Electrochemistry 02.00.06 – High-Molecular Compositions 02.00.11 – Colloid Chemistry 02.00.21 – Solid State Chemistry
	THE FACULTY OF ECONOMICS
38.06.01 – Economics	08.00.01 – Economics Theory 08.00.05 – Economics and National Economy Management 08.00.10 – Finance, Currency Circulation, and Credit 08.00.12 – Accounting and Statistics 08.00.13 – Mathematical and Instrumental Techniques in Economics
	THE FACULTY OF LAW
40.06.01 – Jurisprudence	<ul> <li>12.00.01 - Theory and History of State and Law:</li> <li>History of State and Law Studies</li> <li>12.00.02 - Constitutional Law, Constitutional Procedure, and Municipal Law</li> <li>12.00.04 - Finance, Tax, and Budget Law</li> <li>12.00.05 - Labour and Social Security Law</li> <li>12.00.08 - Criminal Law, Criminology, and Correctional Law</li> <li>12.00.09 - Criminal Procedure</li> <li>12.00.10 - International and European Law</li> <li>12.00.12 - Criminalistics, Judicial and Expert Activity, and</li> <li>Operational Investigations</li> <li>12.00.14 - Administrative Law and Procedure</li> <li>12.00.15 - Civil and Arbitral Procedure</li> </ul>

Postgraduate student training was conducted within the educational programmes developed and approved by the University in accordance with the Federal State Educational Standards.

In 2016, postgraduate students were enrolled on degree courses in accordance with the admission quotas for postgraduate degree programmes approved by the Order of the Ministry of Education and Science of the Russian Federation. Postgraduate students were also admitted to the University on a fee-paying basis.

In the reporting period, 154 students were enrolled on postgraduate degree courses including 100 citizens of the Russian Federation, 3 CIS citizens, and 11 foreign citizens with state-funded places, as well as 31 citizens of the Russian Federation and 9 foreign citizens with fee-paying places.



As of 1 January 2017, the number of postgraduate students amounted to 590 including 480 full-time students and 110 extramural students (Table 4.5).

Table .5

### NUMBER OF POSTGRADUATE STUDENTS ACCORDING TO RESEARCH AREAS AND FIELDS OF STUDY AS OF 1 JANUARY 2017

		Number of postgraduate students					
Codes of research areas and fields of study	Titles of research areas and fields of study	Total	RF citizens	OIS citizens	Foreign citizens		
	Total	590	521	18	51		
	Mathematics and Mechanics	47	47	0	0		
01.01.01	Substantial, Complex, and Functional Analysis	10	10	0	0		
01.01.02	Differential Equations, Dynamical Systems, and Optimal Control	29	29	0	0		
01.02.04	Solid Mechanics	8	8	0	0		
03.06.01	Physics and Astronomy	54	53	0	1		
01.04.02	Theoretical Physics	6	6	0	0		
01.04.03	Radiophysics	20	20	0	0		
01.04.05	Optics	7	7	0	0		
01.04.07	Condensed Matter Physics	7	7	0	0		
	Semiconductor Physics	14	13	0	1		
	Chemical Sciences	46	45	0	1		
	Inorganic Chemistry	7	6	0	1		
	Analytical Chemistry	7	7	0	0		
	Organic Chemistry	8	8	0	0		
	Physical Chemistry	9	9	0	0		
	Electrochemistry	4	4	0	0		
	High-Molecular Compositions	7	7	0	0		
	Colloid Chemistry	1	1	0	0		
	Solid State Chemistry	3	3	0	0		
	Geosciences	42	41	0	1		
	General and Regional Geology	3	3	0	0		
	Palaeontology and Stratigraphy	0	0	0	0		
	Petrology and Volcanology	2	2	0	0		
25.00.06	Lithology	0	0	0	0		
		3	3	0	0		
25.00.08 25.00.10	Geological Engineering, Permafrostology, and Soil Science Geophysics and Geophysical Methods in Mineral Deposit Exploration	1	1 3	0	0		
25.00.11		10	10	0	0		
25.00.23	Physical Geography and Biogeography, Soil Geography and Landscape Geochemistry	2	2	0	0		



Table cont. 4.5

ਰੂ ਦੁ		Number of postgraduate students						
sear			Including					
of re.	Titles of research areas and fields of study		su	SUE				
les ar V		_	itize	CIS citizens	ign ens			
Codes of research areas and fields of study		Total	RF citizens	CIS	Foreign citizens			
	Economic, Social, Political, and Recreational Geography	2	2	0	0			
25.00.36	Geoecology	15	15	0	0			
	Biological Sciences	68	60	1	7			
03.01.02	Biophysics	9	7	1	1			
	Biochemistry	17	14	0	3			
03.01.05	Phytophysiology and Phytochemistry	0	0	0	0			
03.02.01	Botany	6	6	0	0			
03.02.04	Zoology	2	2	0	0			
03.02.05	Entomology	2	2	0	0			
03.02.07	Genetics	15	13	0	2			
03.02.08	Ecology	16	16	0	0			
	Soil Studies	1	0	0	1			
09.06.01	Informatics and Computer Facilities	63	56	0	7			
05.13.01	System Analysis, Management, and Processing of Information	7	7	0	0			
05.13.10	Management in Social and Economic Systems	2	2	0	0			
05.13.17	Theory of Informatics	29	28	0	1			
05.13.18	Mathematical Modelling, Numerical Methods, and Programme Systems	25	19	0	6			
11.06.01	Electronics, Radioengineering, and Communication Systems	5	5	0	0			
05.27.01	Solid-State Electronics, Radioelectronic Components, Microelectronics, Nanoelectronics, and Quantum Effect Devices	5	5	0	0			
33.06.01	Pharmacy	11	7	0	4			
	Pharmacology and Clinical Pharmacology	1	1	0	0			
	Pharmaceutical Chemistry and Pharmacognosy	7	4	0	3			
14.04.03	Pharmacy Business Organisation	3	2	0	1			
	Psychological Sciences	5	4	0	1			
19.00.05	Social Psychology	2	2	0	0			
19.00.07	Pedagogical Psychology	3	2	0	1			
38.06.01	Economics	56	49	2	5			
08.00.01	Economics Theory	8	7	0	1			
08.00.05	Economics and National Economy Management	21	19	1	1			
08.00.10	Finance, Currency Circulation, and Credit	5	4	0	1			
08.00.12	Accounting and Statistics	16	13	1	2			
	Mathematical and Instrumental Techniques in Economics	6	6	0	0			
40.06.01	Jurisprudence	70	61	4	5			
12.00.01	Theory and History of State and Law, History of State and Law Studies	3	3	0	0			
12.00.02	Constitutional Law, Constitutional Procedure, and Municipal Law	3	2	1	0			
12.00.04	Finance, Tax, and Budget Law	5	4	0	1			



End of table 4.5

of ch		Number of postgraduate students					
searc elds				Includin	 D		
Codes of research areas and fields of study	Titles of research areas and fields of study		su	ens			
des a 17 as a		5	RF citizens	citizens	Foreign citizens		
stuce stuce		Total	RF o	CIS	Fore		
	Labour and Social Security Law	0	0	0	0		
12.00.08	Criminal Law, Criminology, and Correctional Law	8	7	1	0		
12.00.09	Criminal Procedure	8	8	0	0		
12.00.10	International and European Law	3	1	1	1		
12.00.12	Criminalistics, Judicial and Expert Activity, and Operational Investigations	3	3	0	0		
12.00.14	Administrative Law and Procedure	26	24	1	1		
12.00.15	Civil and Arbitral Procedure	11	9	0	2		
41.06.01	Political Sciences and Regional Studies	5	4	0	1		
	Political Institutions, Processes, and Technologies	5	4	0	1		
44.06.01	Education and Pedagogical Sciences	11	11	0	0		
13.00.01	General Pedagogics, History of Pedagogics and Education	11	11	0	0		
	Theory and Methods of Vocational Education	0	0	0	0		
	Historical Sciences and Archaeology	17	16	0	1		
	Russian History	10	10	0	0		
07.00.03	General History	4	4	0	0		
07.00.06	Archaeology	3	2	0	1		
07.00.09	Historiography, Source Studies, and Methods of Historical Research	0	0	0	0		
47.06.01	Philosophy, Ethics, and Religious Studies	10	10	0	0		
09.00.01	Ontology and Epistemology	2	2	0	0		
09.00.05	Ethics	4	4	0	0		
09.00.08	Philosophy of Science and Technology	0	0	0	0		
	Social Philosophy	4	4	0	0		
	Linguistics and Literary Studies	73	45	11	17		
	Russian Literature	11 3	9	1 0	1 0		
	Journalism	19	9	3	7		
	Russian Language	19	9	0	8		
	Slavic Languages	0	0	0	0		
	Germanic Languages	9	6	3	0		
		8	5	3	0		
	Romance Languages	8	5 5	3	1		
	Linguistic Theory						
	Comparative, Typological, and Contrastive Linguistics	0	0	0	0		
	Cultural Studies	7	7	0	0		
24.00.01	Theory and History of Culture	7	7	0	0		

### 87



#### SECONDARY VOCATIONAL EDUCATION

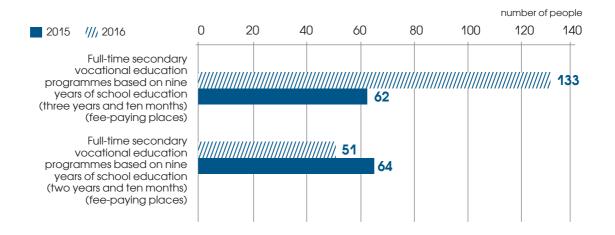
In 2016, an admissions campaign for primary-level programmes, designed for secondary vocational education specialists, was conducted within the framework of five Federal State Educational Standards including 09.02.03 – Programming in Computer Systems, 33.02.01 – Pharmacy, 38.02.01 – Economics and Accounting (area-based), 42.02.01 – Advertising, and 43.02.10 – Tourism.

The number of students enrolled on secondary vocational education programmes lasting three years and ten months amounted to 133 in 2016 and 62 in 2015. The number of students enrolled on secondary vocational education programmes lasting two years and ten months amounted to 51 in 2016 and 64 in 2015.

Programmes lasting three years and ten months aroused the greatest interest among University entrants and the number of students enrolled in 2016 more than doubled in comparison with the 2015 figure (Figure 4.11).

#### Figure 4.11

#### NUMBER OF UNIVERSITY ENTRANTS ENROLLED ON SECONDARY VOCATIONAL EDUCATION PROGRAMMES IN 2016



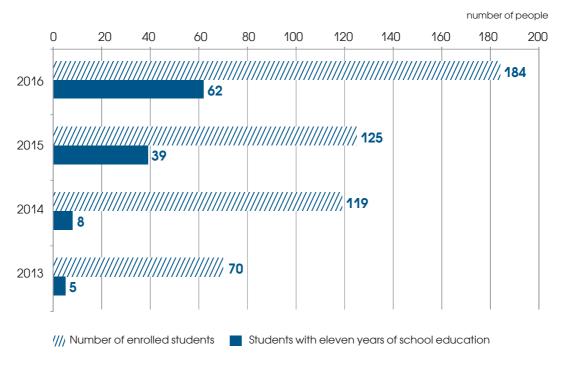


The number of students enrolled on secondary vocational education programmes amounted to 184 in 2016, including 62 students with the Certificate of Secondary General Education (based on eleven years of school education), 125 in 2015, including 39 students with eleven years of school education, 119 in 2014, including 8 students with eleven years of school education, and 70 in 2013, including 5 students with eleven years of school education.

The 2013–2016 admission results indicated a considerable increase in the interest in secondary vocational education programmes among University entrants with the Certificate of Secondary General Education (based on eleven years of school education). In 2016, the number of students with eleven years of school education admitted to VSU almost doubled in comparison with the 2015 figure. In addition, there was some positive dynamics in the admission to secondary vocational education programmes (Figure 4.12).

#### Figure 4.12

#### DYNAMICS OF THE CHANGES IN THE NUMBER OF UNIVERSITY ENTRANTS WITH ELEVEN-YEAR SCHOOL EDUCATION ENROLLED ON SECONDARY VOCATIONAL EDUCATION PROGRAMMES

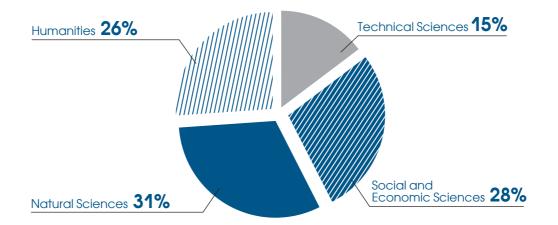




The distribution of students enrolled on secondary vocational education programmes according to their specialisation was as follows: the overwhelming majority of students (31%) chose Natural Sciences (33.02.01 – Pharmacy), 28% – Social and Economic Sciences (38.02.01 – Economics and Accounting (area-based) and 43.02.10 – Tourism), slightly fewer students (26%) opted for Humanities (42.02.01 – Advertising), and the rest of the students (15%) chose Technical Sciences (09.02.03 – Programming in Computer Systems) (Figure 4.13).

#### Figure 4.13

#### DISTRIBUTION OF STUDENTS WITHIN SECONDARY VOCATIONAL EDUCATION PROGRAMMES IN 2016 ACCORDING TO SPECIALISATIONS



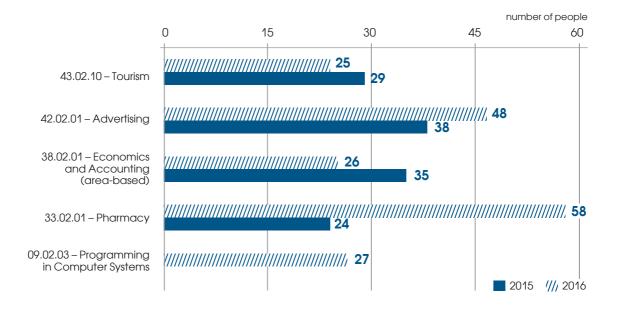
The fastest-developing programmes were 33.02.01 – Pharmacy and 42.02.01 – Advertising. The admission to the speciality 33.02.01 – Pharmacy more than doubled. The specialities 38.02.01 – Economics and Accounting (area-based) and 43.02.10 – Tourism slightly lost their ground. However, these specialities have continually demonstrated good results in the number of students enrolled on secondary vocational education programmes.



The dynamics in the development of secondary vocational education programmes is highlighted by the changes in the number of students enrolled on the implemented programmes in 2015-2016. The number of students admitted to the speciality Pharmacy amounted to 58 in 2016 and 24 in 2015, Advertising – 48 in 2016 and 38 in 2015, Programming in Computer Systems – 27 in 2016, in 2015, the admission to the speciality was not available, Tourism – 25 in 2016 and 29 in 2015, and Economics and Accounting (area-based) – 26 in 2016 and 35 in 2015 (Figure 4.14).

#### Figure 4.14

#### DYNAMICS OF THE CHANGES IN THE NUMBER OF STUDENTS ADMITTED TO THE IMPLEMENTED SECONDARY VOCATIONAL EDUCATION PROGRAMMES IN 2015-2016



The grade point average (GPA) is an important criterion of educational activity. For students enrolled on secondary vocational education programmes they were as follows: Pharmacy – 4.27, Tourism – 3.95, Economics and Accounting (area-based) – 4.14, Advertising – 4.05, and Programming in Computer Systems – 3.95. It should be noted that the GPA of students within all VSU secondary vocational education programmes was above the nationwide GPA which amounted to 3.7.



Figure 4.15

As of 1 October 2016, the number of secondary vocational education students of all years of study totalled 463. Figure 4.15 shows their distribution according to programmes.

#### DISTRIBUTION OF STUDENTS ACCORDING TO SECONDARY VOCATIONAL EDUCATION PROGRAMMES number of people 0 20 40 60 80 100 120 140 160 180 42.02.01 – Advertising 167 38.02.01 - Economics and Accounting (area-based) 43.02.10 - Tourism 09.02.03 - Programming in Computer Systems

In 2016, Voronezh State University took part in the Secondary Vocational Education Monitoring for the first time. The monitoring is designed to assess the quality of specialists training in educational organisations which implement secondary vocational education programmes. VSU's performance in the field of educational activity, infrastructure development, and programme implementation was above the average.

The "Molodezhnyi" employment centre organised a training workshop for the secondary vocational education graduates specialising in Advertising. The workshop was held for the first time and was devoted to successful employment.

In order to organise practical training for its students, VSU signed 24 long-term agreements with various organisations including 22 agreements with an unlimited number of places.

In 2016, calculation of the teaching loads for secondary vocational education programmes as well as printing and filling out diplomas and diploma supplements was automated.



#### 4.5. INFORMATION ABOUT THE SCHOLARSHIP PROGRAMMES IMPLEMENTED AT VSU

Apart from obtaining academic scholarships and bursaries, University students have an opportunity to take part in different scholarship programmes which are aimed at supporting talented young people (Table 4.6).

#### Table 4.6

#### TYPES OF UNIVERSITY SCOLARSHIP PROGRAMMES FOR UNDERGRADUATE AND POSTGRADUATE STUDENTS

Number of Scholarship programme scholarships Funded from the federal budget Scholarship of the President of the Russian Federation 1 Scholarship of the Government of the Russian Federation 1 Scholarship of the President of the Russian Federation in the top-priority fields 12 Scholarship of the Government of the Russian Federation in the top-priority fields 17 Grant of the President of the Russian Federation (within the programme 1 'Talent and Success") Funded by the long-term regional target programme "Education Development in the Voronezh Region" 7 Scholarship of the Government of the Voronezh Region Funded by VSU VSU Academic Council Scholarship 5 2 Professor L. D. Kokorev Scholarship 2 Professor G. F. Gorskiy Scholarship 1 Professor I. A. Galagan Scholarship 2 Professor V. S. Osnovin Scholarship Professor V. A. Panushkin Scholarship 2 Professor A. M. Abramov Scholarship 1 2 Professor M. S. Tochilin Scholarship Professor M. A. Levitskaya Scholarship 2 Professor V. A. Lisitskiy Scholarship 1 1 Professor Yu. A. Rylov Scholarship Professor G. Ye. Vedel Scholarship 1 2 Professor L. T. Gilyarovskaya Scholarship Professor V. N. Eytingon Scholarship 2 Professor M. A. Krasnoselskiy Scholarship 1 1 Professor V. I. Sobolev Scholarship Funded by employers 7 Scholarship of the Informsvyaz-Chernozemye data provider Novolipetsk Steel PAO NLMK Scholarship 10 Personal scholarships of the Angstrem manufacturing company 4 000 LUKOIL-Chernozemienefteprodukt Scholarship 5 AO PricewaterhouseCoopers Audit Scholarship 2 Funded by Oxford Russia Fund 85 Oxford Russia Fund Scholarship

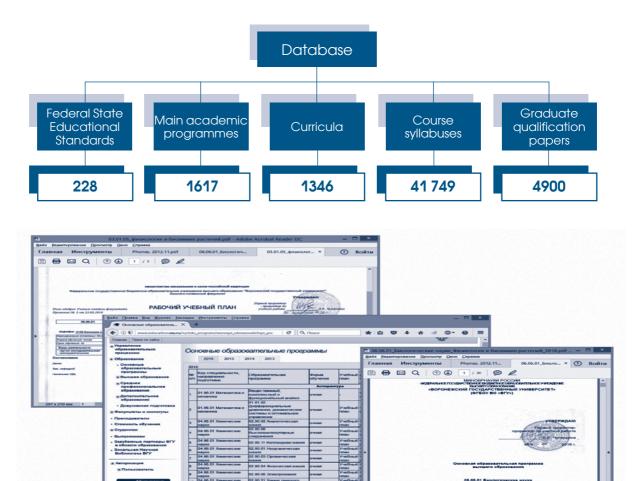


# 4.6. INFORMATION ABOUT INNOVATIVE EDUCATIONAL TECHNOLOGIES AND DISTANCE EDUCATION

The "Electronic University VSU" web portal (https://moodle.vsu.ru) is an integrated education and information system of the University created in accordance with the Federal Law "On Education in the Russian Federation" and the Federal State Educational Standards. In 2016, the portal's database was constantly extended with the main academic programmes (Figure 4.16). The integration of the "Electronic University VSU" portal with such management information systems as "Contingent", "Human Resources", "Curriculum", and others provided for the integrity and validity of the information on the portal.

#### Figure 4.16

#### "ELECTRONIC UNIVERSITY VSU" DATABASE IN 2016

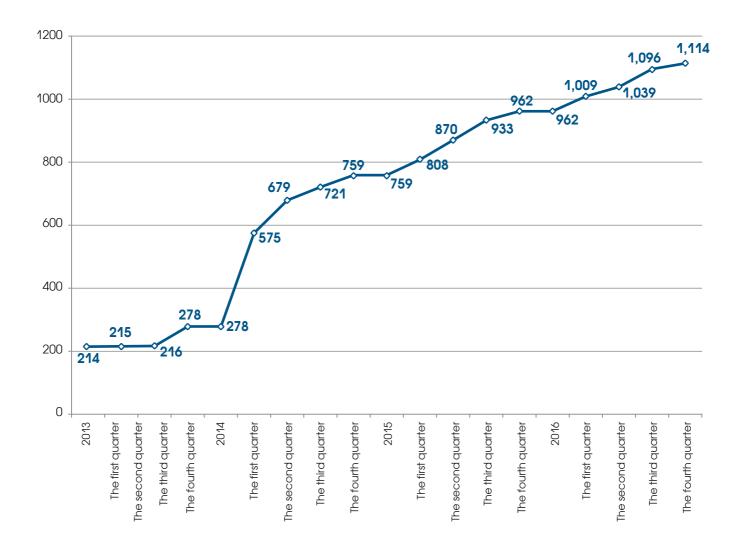




In the reporting period, the opportunities for interactions between students and academic staff members were gradually developed through the use of new communication options by means of the Internet and the Moodle platform in particular. At present, students and academic staff members can communicate by means of instant messages, comments, forums, chats, surveys, feedback, questionnaires, blogs, video conferences, etc.

The number of e-courses for students within the main academic programmes increased considerably (Figure 4.17). The structure of the elements which were used to create e-courses show that the number of active elements such as HTML pages, video conferences, and hyperlinks gradually increased (Figure 4.18).

#### Figure 4.17

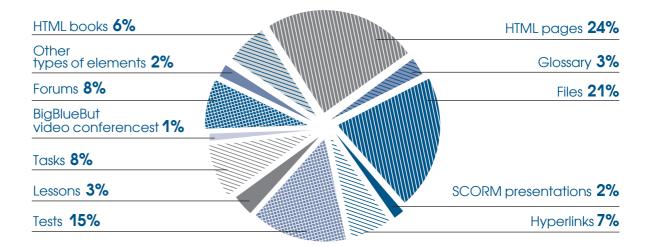


#### DYNAMICS OF THE E-COURSES REGISTRATION



Figure 4.18

#### STRUCTURE OF THE E-COURSES ELEMENTS



In 2016, University lecturers obtained 56 certificates verifying that their e-courses were officially acknowledged as teaching aids.

### UPLOAD OF GRADUATE QUALIFICATION PAPERS TO THE PORTAL AND THEIR CHECK IN THE "ANTIPLAGIAT" SYSTEM

In 2016, a new service appeared on the portal. It allows senior students to upload files with their graduate qualification papers to the portal's database by themselves. The "Antiplagiat" system automatically checks the uploaded papers for plagiarism (Figure 4.19). The database contains now over 4,900 papers.

#### Figure 4.19

## AVERAGE NUMBER OF ORIGINAL PARTS IN GRADUATE QUALIFICATION PAPERS BY FACULTIES

	0	10 2	0	30 4	10 5	50 6	0 7	3 0	30	90	100 %
The Faculty of Law						49					
The Faculty of Economics							// 61				
The Faculty of Chemistry								//////.76	5		
The Faculty of International Relations								76	5		
The Faculty of Computer Sciences									/////// e	36	
The Faculty of Philosophy and Psychology		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		/// 73			
The Faculty of Philology									//// 83		
The Faculty of Physics								/////// 70	5		
The Faculty of Pharmaceutics			///////////////////////////////////////				61				
The Faculty of Physics, Mathematics, and Natural Sciences (Borisoglebsk Branch)							/// 62				
The Faculty of Romance and Germanic Philology									79		
The Faculty of Psychology and Pedagogy (Borisoglebsk Branch)							// 61				
The Faculty of Applied Mathematics, Informatics, and Mechanics				,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				///////////////////////////////////////	/// 82		
The Faculty of Biomedical Sciences								<b>//////</b> / 76			
The Faculty of Mathematics					///////////////////////////////////////		///////////////////////////////////////		/// 82		
The Faculty of History and Philology (Borisoglebsk Branch)		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,					/////// 67	7			
The Faculty of History					,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		///////////////////////////////////////		79		
The Institute of Extramural Education							59				
The Faculty of Journalism									//// 82		
The Faculty of Geography, Geoecology, and Tourism		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		////// 75			
The Faculty of Geology				<i>.</i>					////// 84		

#### FURTHER EDUCATION IN THE DISTANCE LEARING MODE

The portal contains 12 distance learning e-courses for the USE training in various disciplines.

The Faculty of Biomedical Sciences developed and tested 9 distance learning courses devoted to environmental issues and designed for further vocational education students.

A distance learning course "E-Learning and Distance Learning Technologies in the Educational Process" was developed and tested within the advanced training programme for academic staff members in the field of e-learning and distance learning technologies.

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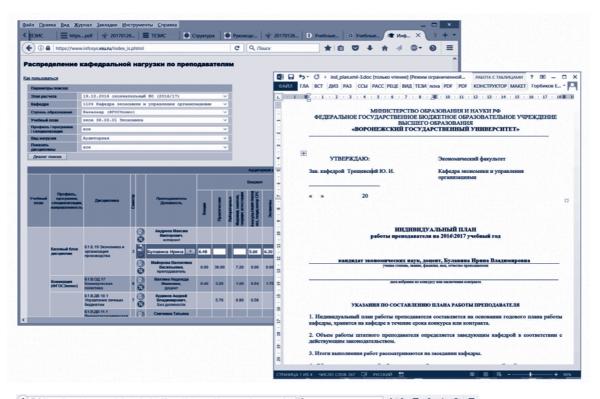
#### **"VSU OPEN COURSES" SERVICE**

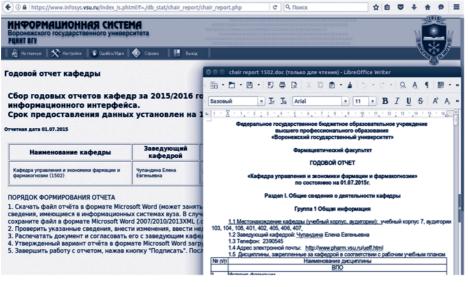
The service comprises 11 e-courses which are available for Internet users and the portals' authorised users in demo mode.

In 2016, the distribution of the department teaching load among lecturers' individual work plans and the department annual report compilation were automated, which provided for the reduction of the time spent by academic staff members on the organisational support of the educational process (Figure 4.20).

#### Figure 4.20

#### AUTOMATION OF ASPECTS OF THE EDUCATIONAL PROCESS





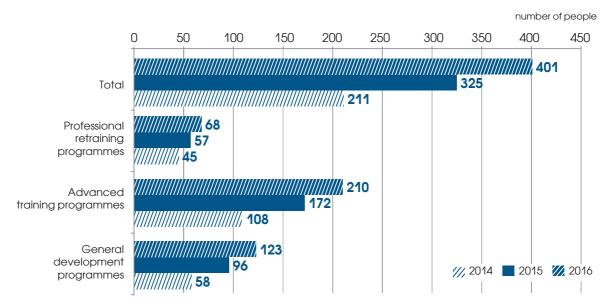


#### 4.7. QUANTITATIVE AND QUALITATIVE DATA ON FURTHER EDUCATION

In 2016, there was a steady increase in the number of further education programmes (hereinafter FEP). The total number of programmes amounted to 401, including 68 professional retraining programmes, 210 advanced training programmes, and 123 general development programmes. Figure 4.21 represents FEP quantitative dynamics.

#### Figure 4.21

## QUANTITATIVE DYNAMICS OF VSU FURTHER EDUCATION PROGRAMMES IN 2014–2016

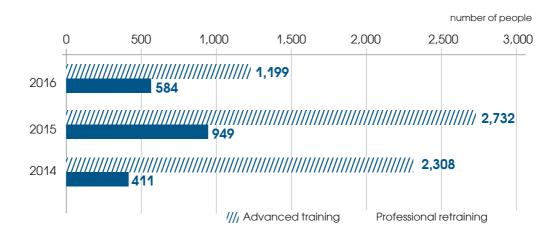


In 2016, 1,783 participants completed their training within further vocational education programmes at Voronezh State University and its branches. 584 of them underwent professional retraining, and 1,199 advanced their qualifications.

Figure 4.22 shows the quantitative dynamics of the graduates of further vocational education courses in comparison with 2015 and 2014.

#### Figure 4.22

#### QUANTITATIVE DYNAMICS OF THE GRADUATES OF VSU FURTHER EDUCATION COURSES IN 2014–2016





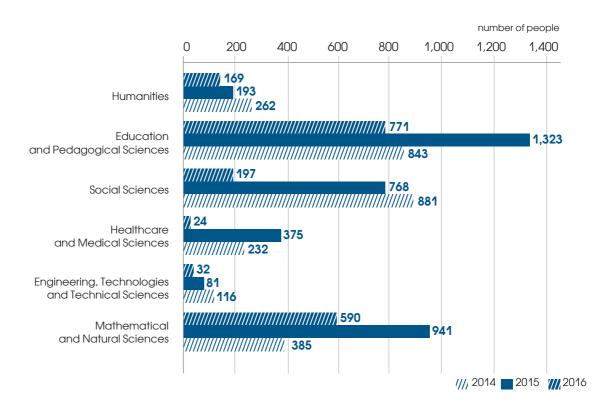
Compared with the previous period, the frequency distribution of students who completed advanced training and professional retraining courses according to fields of education was as follows:

- 590 students were trained in Mathematical and Natural Sciences.
- 32 in Engineering, Technologies, and Technical Sciences.
- 24 in Healthcare and Medical Sciences.
- 197 in Social Sciences.
- 771 in Education and Pedagogical Sciences.
- 169 in Humanities.

This is shown in Figure 4.23.

#### Figure 4.23

## DISTRIBUTION OF THE GRADUATES OF FURTHER VOCATIONAL EDUCATION COURSES ACCORDING TO FIELDS OF EDUCATION

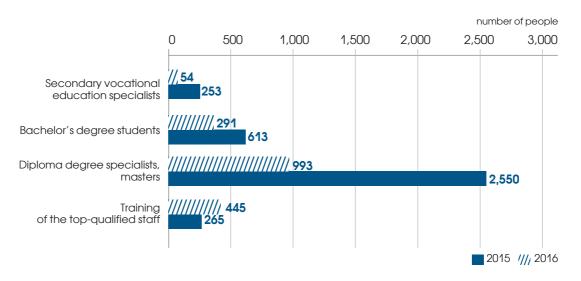


As for degree levels, 54 students with secondary vocational education, 291 students with bachelor's degrees, and 445 students with top qualifications were trained at the University within FEP in 2016. The majority of students who completed further vocational education courses had diploma and master's degrees (993 people). Figure 4.24 represents the frequency distribution of students according to degree levels in comparison with 2015.



Figure 4.24

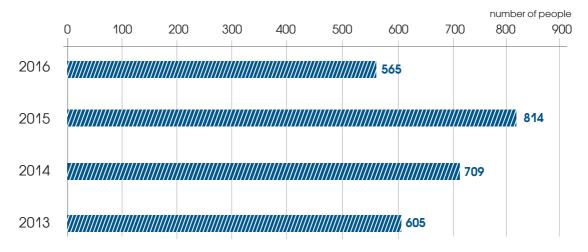
## DISTRIBUTION OF THE GRADUATES OF FURTHER VOCATIONAL EDUCATION COURSES ACCORDING TO DEGREE LEVELS



In 2016, 565 people were trained thanks to funding by their employers. In 2015–814 people, in 2014 – 709 people, and in 2013 – 605 people (Figure 4.25). There was a slight decline in the number of employees who were sent to take advanced training courses. The main reason for that was a decrease in funding of this expenditure item, which resulted from economic instability.

#### Figure 4.25

#### NUMBER OF PARTICIPANTS TRAINED THANKS TO FUNDING BY EMPLOYERS IN 2013–2016





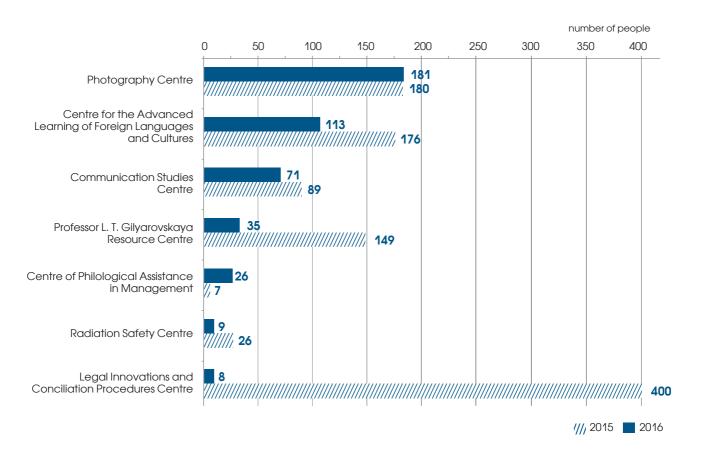
In 2016, further education centres continued their efficient operation.

- In the reporting period, 35 participants completed their training at Professor L. T. Gilyarovskaya Resource Centre.
- 113 at the Centre for the Advanced Learning of Foreign Languages and Cultures.
- 8 at the Legal Innovations and Conciliation Procedures Centre.
- 71 at the Communication Studies Centre.
- 181 at the Photography Centre.
- 26 at the Centre of Philological Assistance in Management.
- 9 at the Radiation Safety Centre.

Figure 4.26 shows the number of students studying at further education centres in comparison with 2015.

#### Figure 4.26

#### NUMBER OF STUDENTS AT VSU FURTHER EDUCATION CENTRES



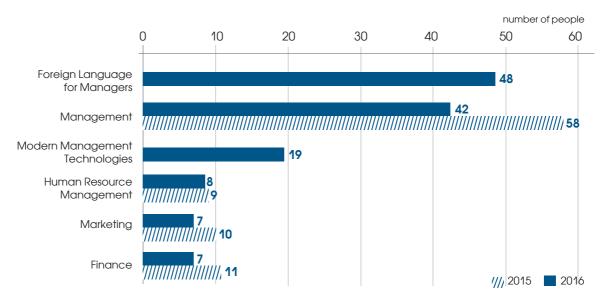


In 2016, 64 public servants were trained at the University within advanced training programmes. The majority of them (58 people) advanced their qualifications at the Communication Studies Centre within the advanced training programmes "Culture of Oral and Written Speech as One of the Key Factors for the Professional Competence of Civil Officers" and "Efficient Communication as One of the Key Factors for the Professional Competence of Civil Officers".

The state plan programme on training managers for enterprises of the national economy of the Russian Federation was extended until the 2017/18 academic year by the Order of the Government of the Russian Federation dated 3 September 2015, No 928. In 2016, Voronezh State University trained 131 managers for regional enterprises and organisations, including 48 managers within the programme Foreign Language for Managers, 42 managers within the programme Management, 19 managers within the programme Modern Management Technologies, 8 managers within the programme Management (specialisation Human Resource Management), 7 managers within the programme Marketing, and 7 managers within the programme Finance (Figure 4.27).

#### Figure 4.27

#### STATE PLAN PROGRAMME ON TRAINING MANAGERS FOR ENTERPRISES OF THE NATIONAL ECONOMY OF THE RUSSIAN FEDERATION



VSU continued to conduct professional training of experts with a university degree in Pharmacy. In 2016, 157 people completed their training within FEP at the Department of Pharmacy. Among them, there were 84 pharmacists who were trained within the certification cycle programme Pharmacy Economics and Management, 2 pharmacists within the certification cycle programme Pharmaceutical Engineering, 7 pharmacists withinthecertificationcycleprogrammePharmaceuticalChemistryandPharmacognosy, and 49 pharmacy technicians within the certification cycle programme Contemporary Aspects of the Pharmacy Technician Profession. 14 pharmacists underwent professional retraining within the programme PharmaceuticalChemistry and Pharmaceut, and 1 pharmacist – within the programme Pharmaceutical Chemistry and Pharmacognosy.

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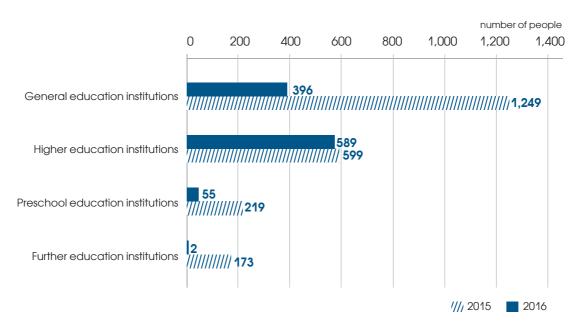


In the reporting period, teaching employees were actively trained within further education programmes.

In collaboration with the Borisoglebsk branch, 589 lecturers from higher education institutions, 396 teachers from general education institutions, 55 teaching employees from preschool education institutions, and 2 teaching employees from further education institutions completed their courses, which totalled 1,042 people (Figure 4.28).

#### Figure 4.28

FREQUENCY DISTRIBUTION OF TEACHING EMPLOYEES WHO COMPLETED FURTHER VOCATIONAL EDUCATION COURSES ACCORDING TO THEIR PLACE OF EMPLOYMENT



In 2016, 120 expert members of the examination commissions for USEs in Mathematics, Physics, Chemistry, Social Studies, English, German, and French advanced their qualifications at Voronezh State University.

The University continued to award a further education qualification "Lecturer" within various specialities. The number of graduates within the abovementioned professional retraining programmes amounted to 79.



Voronezh State University consistently implements further education programmes in cooperation with leading IT-companies. These programmes include "CISCO Certified Internetwork Expert (CCNA Exploration)", "InfoTeCS Certified Training", and several courses from Atos IT Solutions and Services: "Administration of Information Systems", "Controlling in the Corporate Finance Management System", and "Software Support and Maintenance (SAP System)".

Programmes from the Wizart Animation School remain quite popular, such as "Animation Expert", "Compositing Expert", "Autodesk 3DS Max Expert", "Autodesk Maya Expert", and "Pixologic Zbrush Expert". In 2016, their graduates amounted to 32.

In the reporting period, further education programmes were uploaded to the "Electronic University VSU" portal, which facilitated the rendering of educational services in the distance learning mode. At present, the University and the National Open Education Platform are negotiating the question of uploading open further education courses to the global online education platform.

#### 4.8. EDUCATION QUALITY ASSESSMENT SYSTEM

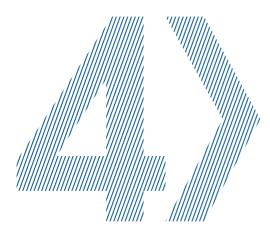
The University's education quality assessment system includes the internal assessment and the external independent expert evaluation of the quality of educational programmes with due consideration to the opinions and satisfaction of clients and all the parties concerned. It also involves an assessment of the compliance with the requirements of the Federal State Educational Standards, an assessment of the University management system quality in accordance with ISO international standards, and an assessment made by professional communities and employers.

In accordance with the requirements of the Federal State Educational Standards, educational quality monitoring within the main academic programmes is conducted by means of current, midterm, and final assessments.

In the 2015/16 academic year, mid-year examinations were held within the time limits approved by the Orders of the Rector dated 20 November 2015, No 914, 27 November 2015, No 932, and 16 December 2015, No 981. The examinations were attended by 15,681 students, which amounted to 92.8% of all University students.

75% of the students who were allowed to sit the examinations managed to pass them, which exceeded the rate of the previous mid-year examinations by 5.5%.

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Academic performance by faculties and with allowance for attempts to re-sit the examinations is represented by Figure 4.29. In the 2015/16 academic year, an average grade for the mid-year examinations amounted to 3.98, which exceeded the figure of the previous mid-year examinations by 0.01.

#### Figure 4.29

ACADEMIC PERFORMANCE OF ALL UNIVERSITY STUDENTS IN THE MID-YEAR EXAMINATIONS ACCORDING TO FACULTIES

	20	30	40	50	60	70 8	30	90	100 %
of Extramural nic Education									100
onal Relations								////////90	6.2
ty of Geology								91.1	
narmaceutics							////// 85	5.8	
lical Sciences							////// 85	5.1	
of Economics							////// 85	<b>5.0</b>	
of Romance anic Philology							///// <u>/</u> 84	.1	
ty of Philology						//////////////////////////////////////	7.9		
of Chemistry						/////// <u>/</u> 78	5.7		
Mathematics						///// <u>/</u> 74.	6		
of Journalism						72.0			
culty of History						69.3			
Mathematics, nd Mechanics						68.3			
f Geography, /, and Tourism						68.3			
uter Sciences					/////////	57.9			
aculty of Law					61.5				
d Psychology					59.0				
ulty of Physics				///////	56.8				
			1				1		

The Institute c Economi The Faculty of Internatio The Faculty The Faculty of Ph The Faculty of Biomedia The Faculty o The Faculty and Germa The Faculty The Faculty The Faculty of N The Faculty of The Facu The Faculty of Applied M Informatics, and The Faculty of Geoecology, The Faculty of Compu The Fo The Faculty of Philosophy and The Facu



In the 2015/16 academic year, end-of-year examinations were held within the time limits approved by the Order of the Rector dated 21 March 2016, No 191. The examinations were attended by 14,307 students, which amounted to 87.4% of all University students. 75.7% of the students who were allowed to sit the examinations managed to pass them, which was 1.3% less than the rate of the previous end-of-year examinations.

Academic performance by faculties and with allowance for attempts to re-sit the examinations is represented by Figure 4.30.

#### Figure 4.30

#### ACADEMIC PERFORMANCE OF ALL UNIVERSITY STUDENTS IN THE END-OF-YEAR EXAMINATIONS ACCORDING TO FACULTIES

	20	30	40	50	60	70	80	90	100 %
The Institute of Extramural Economic Education									//// 100
The Faculty of Geology								89.0	
The Faculty of Economics								85.8	
The Faculty of Philology								85.5	
The Faculty of International Relations									
The Faculty of Biomedical Sciences								84.5	
The Faculty of Chemistry							////// 80	.8	
The Faculty of Romance and Germanic Philology							///// <u>/</u> 80.	5	
The Faculty of Geography, Geoecology, and Tourism							///// 79. <sup>•</sup>	1	
The Faculty of Applied Mathematics, Informatics, and Mechanics							78.3		
The Faculty of Pharmaceutics							77.5		
The Faculty of History									
The Faculty of Mathematics							75.4		
The Faculty of Computer Sciences									
The Faculty of Physics						69.4	1		
The Faculty of Philosophy and Psychology						69.3			
The Faculty of Journalism						62.8			
The Faculty of Law					54.6				



Students, academic staff members, and other participants of the educational process are annually surveyed in order to identify the level of satisfaction with the quality of education.

In 2016, the survey was participated in by 1,668 students whose level of satisfaction amounted to +0.53, which exceeded the 2015 rate.

A number of the main educational aspects underwent a separate assessment (Table 4.7).

#### Table 4.7

#### SATISFACTION OF VSU STUDENTS WITH ASPECTS OF THE EDUCATIONAL PROCESS IN INDICES IN 2016

#### 

Assessed aspects	Satisfaction indices		
Quality of academic timetables (accuracy, layout)	+0.58		
Attitude to students shown by the lecturers of the same faculty	+0.74		
Attitude to students shown by the lecturers of other faculties	+0.57		
Level of teaching special disciplines (application of new methods, facilities, interactivity, etc)	+0.62		
Level of teaching general theoretical disciplines	+0.76		
Level of teaching Social Sciences and Humanities	+0.72		
Content of disciplines within the speciality	+0.66		
Availability of study materials at the library	+0.60		
Attitude to students shown by the library personnel	+0.61		
Availability of places in classrooms	+0.76		
General assessment of the educational process	+0.75		

In 2016, in order to introduce innovative technologies and training practices to the educational process, to improve the quality of teaching, and to motivate the professional development of academic staff members (particularly, by means of remuneration), the University implemented an ongoing project "Leader of the Year" which included the following nominations: Best Professor, Best Associate Professor, Best Teaching Assistant, Best Head of the Department, and Best E-Course. Financing for the contest amounted to 820 thousand roubles.

The quality of graduates' training within the main academic programmes allowed VSU to win an award in the "Voronezh Quality" contest, a local stage of the "100 Best Russian Products" national contest (Figure 4.31).

In 2016, Voronezh State University won the XIX National Contest and was entitled to use the golden label of the "100 Best Russian Products" programme in the "Higher Education Services" nomination.



In April 2016, the University passed a current supervisory audit of the quality management system to confirm its compliance with the requirements of the ISO international standard. NQA auditors highlighted that VSU was quite active in the field of international cooperation and its staff successfully dealt with solving strategic tasks. They also praised the University's positions in national and international rankings and the strategy developed for VSU's faculties with due account for University's specific features and resources.

## Figure 4.31

VORONEZH STATE UNIVERSITY – AN AWARD WINNER OF THE "VORONEZH QUALITY" REGIONAL CONTEST IN THE "HIGHER EDUCATION SERVICES" NOMINATION

$\overline{\mathbb{R}}$		
	2016	
	Правительство Воронежской области Федеральное бюджетное учреждение «Государственный региональный центр стандартизации, метрологии и испытаний в Воронежской области»	
	ДИПЛОМ	
	Лауреата смотра-конкурса «Воронежское качество»	
	Услуги в системе	
	высшего образования ФГБОУ ВПО «Воронежский	
	государственный университет»	
	Заместитель Директор председателя правительства ФБУ «Воронежский ЦСМ» Воронежской области	
	А.Ю. Верховцев Наши И.И. Павельев	
	Воронеж	



## Figure 4.32

## VORONEZH STATE UNIVERSITY – AN AWARD WINNER OF THE "100 BEST RUSSIAN PRODUCTS" NATIONAL CONTEST IN THE "HIGHER EDUCATION SERVICES" NOMINATION



In 2016, higher education programmes continued to undergo the process of public and professional accreditation. Experts from the Chamber of Commerce and Industry of the Voronezh Region accredited several higher education programmes.

- At the Faculty of International Relations, the programmes 41.03.05 International Relations (a bachelor's degree programme), 41.03.01 – International Regional Studies (a bachelor's degree programme), 41.04.05 – International Relations (a master's degree programme), and 41.04.01 – International Regional Studies (a master's degree programme) were accredited for five years.
- At the Faculty of Biomedical Sciences and the Faculty of Geography, Geoecology, and Tourism, the programmes 05.03.06 – Ecology and Natural Resource Management (a bachelor's degree programme) and 05.04.06 – Ecology and Natural Resource Management (a master's degree programme) were accredited for five and four years respectively.

In 2016, VSU's branch in Borisoglebsk successfully underwent independent education quality assessment according to the certified accreditation assessment materials. The University was granted with the quality certificate proving that it had passed the Federal Internet Examination in the field of education within the programme 44.03.05 – Pedagogical Education (with two specialisations).



In 2016, VSU continued to develop and introduce new local documents. The number of documents which were put into effect totalled 393 (Table 4.8).

## Table 4.8

LOCAL UNIVERSITY DOCUMENTS PUT INTO EFFECT IN 2016

Type of the document	Number
Standards	91
Regulations	116
Regulations on structural subdivisions	54
Documented procedures	1
Instructions	13
Rules	4
Procedures	3
Forms	42

## 4.9. BRIEF SUMMARY OF THE MAIN ACHIEVEMENTS IN 2016

- **1.** The admission quotas and the number of students admitted to the main higher education programmes on a fee-paying basis exceeded all the figures of previous years. Efficient pre-university work was the main reason for the admissions campaign to become successful.
- 2. There was consistent growth in the number of educational programmes at all degree levels.
  - The University obtained a licence for the master's degree programme in Linguistics.
  - The licence for the speciality War Journalism was re-issued.
  - Seven new master's degree programmes in Geology, Pedagogical Education, Management, Ecology and Natural Resource Management, Psychology, and Chemistry were developed and approved.
- 3. Four bachelor's and four master's degree programmes successfully underwent public and professional accreditation to comply with the requirements of professional standards and the regional labour market. In 2016, VSU's branch in Borisoglebsk successfully underwent independent education quality assessment according to the certified accreditation assessment materials.
- **4.** The number of further vocational education programmes increased by 12% and amounted to 401.

















# RESEARCH, INNOVATIONS, AND INFORMATISATION





V.N. Popov, Vice rector for Research and Innovations

## RESEARCH, INNOVATIONS, AND INFORMATISATION

## 5.1. MAIN OBJECTIVES OF VSU IN THE AREA OF RESEARCH, INNOVATIONS, AND INFORMATISATION IN 2016

In 2016, in order to reach VSU's strategic aim until year 2020 – to achieve international recognition of the university as one of the leading traditional centres of education and research in Russia – the VSU administration and academic staff ran the following projects in the area of research and innovations.

# PROJECT "VSU JOURNALS INCLUDED IN INTERNATIONAL DATABASES, SUCH AS WOS AND SCOPUS"

The University publishes 15 journals that are included in the list of referenced scholarly journals recommended by the State Commission for Academic Degrees and Titles, which makes VSU the leader among universities in Voronezh.

Three of the VSU-published journals are now included in international databases.

'Vestnik Voronezhskogo Gosudarstvennogo Universiteta, series 'Geology' is included in the GeoRef database.

Two journals are included in the Chemical Abstracts database:

- "Condensed matters and interphase boundaries".
- \*Adsorption and Chromatography Processes".

The board of experts of the eLIBRARY has recently published a list of journals included in the Russian Science Citation Index (RSCI) based on Web of Science. Among them are four journals by Voronezh State University:

- Vestnik Voronezhskogo Gosudarstvennogo Universiteta, series 'Geology'.
- Vestnik Voronezhskogo Gosudarstvennogo <u>U</u>niversiteta, series 'Geography. Geoecology'.
- Condensed Matters and Interphase Boundaries".
- Adsorption and Chromatography Processes".



## Project "PROMOTING TOP-RATED PUBLICATIONS OF VSU RESEARCHERS"

In 2016, over 80 VSU academic staff members received bonuses for publishing their articles in highly ranked journals (with an impact factor of at least 2 according to Web of Science Citation Report). VSU academic staff members published their articles in such journals as Nature Methods, Precambrian Research Physical Review A, Journal of Luminescence, and Journal of Plant Physiology.

**Project "ELECTRONIC DOCUMENT FLOW MANAGEMENT**". The following tasks were accomplished within the project:

- Maintaining and developing the university's telecommunication system, the Wi-Fi network, and the Voice over IP system.
- Maintaining and developing the information systems for the university's management, the university's official website, and all the web portals.
- Developing a VSU mobile application.
- Developing the Data Processing Centre of Voronezh State University.
- Developing electronic education technologies, e-learning, and distant learning.

## Project "ENTREPRENEURIAL UNIVERSITY"

In 2016, VSU continued its activities aimed at implementing the Triple Helix model, as well as at developing and promoting an entrepreneurial culture and favourable environment that allows implementing the entrepreneurial initiatives and projects of the VSU students and staff. These activities characterise the university's innovation ecosystem. The main activities were focused on the following objectives:

- Increasing the number of students and staff involved in the innovative and entrepreneurial activities.
- Introducing elements necessary to pre-accelerate and accelerate innovations.
- Organisingbusinesseducation(socialandtechnology-orientedentrepreneurship).
- Developing accessible social, research and innovative infrastructure that allows implementing entrepreneurial projects.
- Communicating with business entities of the region in order to find new sources of finance for innovative activities.
- Collaborating with federal and regional bodies, state funds, and organisations, in order to develop innovative and entrepreneurial initiatives at the university.
- Optimisation and development of existing small innovative businesses (SIBs).

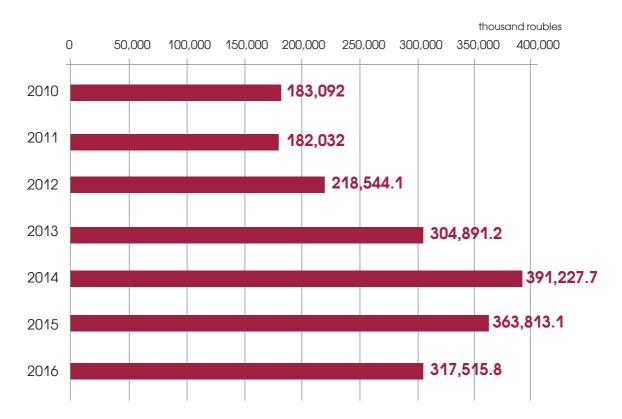


## 5.2. RESEARCH FUNDING IN 2016

In 2016, the total research projects funding amounted to 317.5 million roubles (Fig. 5.1). The decrease in funding (compared to the figures of 2014–2015) is due to the fact that the university finished two large research projects implemented within the Decree of the Government of the Russian Federation No.218 dated 9 April 2010 (the project's funding in 2014 amounted to 100.0 million roubles, in 2015 – to 76.0 million roubles, and in 2016 – to 30.0 million roubles). Unfortunately, despite a significant increase in other sources of funding, it was not sufficient to cover the shortfall.

## Figure 5.1

## **RESEARCH FUNDING IN 2010–2016**





## 5.3. VSU RESEARCH FUNDING SOURCES IN 2016

Of the total sum invested in research: 59.8 million roubles (18.8%) was received for the funding of 30 research projects under the Government Order by the Ministry of Education and Science of the Russian Federation. 57.7 million roubles (18.2%) – for funding of research and development in top-priority areas of science and technology in Russia for the 2014–2020 Federal Target Programme. Grants from the Russian foundations supporting scientific and technical research and innovations constituted 95.5 million roubles (30.1%).

In 2016, state funding constituted 71.7% of the total funding. 24.2% came from industrial enterprises and other organisations that were interested in innovations and planned to implement within their production process the results of the research conducted at VSU.

The sources of VSU's research funds are listed in Table 5.1.

## Table 5.1

## SOURCES OF VSU'S RESEARCH FUNDS IN 2016

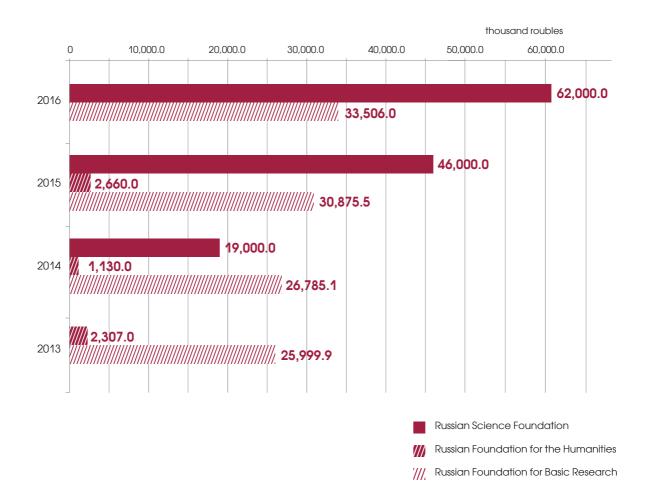
Source of funding	%
Ministry of Education and Science of the Russian Federation	38.5
Other ministries, federal agencies, and institutions	2.4
Russian foundations supporting scientific and technical research and innovations	30.1
Federation subjects and local budget	0.7
Russian Economic Entities	24.2
Other non-governmental organisations in Russia and VSU funds	3.5
International sources	0.6



Research funding coming from Russian scientific foundations is shown in Figure 5.2.

## Figure 5.2

## RESEARCH FUNDING COMING FROM RUSSIAN SCIENTIFIC FOUNDATIONS





## 5.4. PAPERS PUBLISHED BY VSU'S ACADEMIC STAFF IN 2016

The statistics on publications by VSU's academic staff members are shown in Figures 5.3 and 5.4.

## Figure 5.3

## PUBLICATION DATA ACCORDING TO WEB OF SCIENCE CORE COLLECTION

year	0	20	40	60	80	100	120	140	160	180	200	220	240	published articles
1997														unicies
1998														
1999					///////////////////////////////////////									
2000														
2001					///////////////////////////////////////	///////////////////////////////////////								
2002										<b></b>				
2003	///////													
2004														
2005														
2006														
2007														
2008											•			
2009														
2010														
2011														
2012														
2013														
2014														
2015														
2016														

## Figure 5.4

## CITATION DATA ACCORDING TO WEB OF SCIENCE CORE COLLECTION AS OF 28 FEBRUARY 2017

year	0 2	00 40	00 6	00 80	00 1,	000 1,	200 1,4	00 1,60	)0 number – of citations
1998		//////							- or circulons
1999									
2000			1						
2001		////////							
2002		///////////////////////////////////////	///////						
2003		///////////////////////////////////////							
2004									
2005									
2006									
2007				/////					
2008									
2009									
2010									
2011									
2012									
2013									
2014									
2015									
2016									1
2017									





# 5.5. VSU'S ACADEMIC AND SCIENTIFIC SCHOOLS AND RESEARCH AREAS

## RESEARCH AT VSU IS CARRIED OUT WITHIN 28 MAJOR AREAS:

- 1. Analytical, geometrical, and numerical methods of studying differential equations.
- 2. Function theory and functional analysis.
- 3. Mathematical modelling, software, and dataware, methods of numerical and applied mathematics in fundamental scientific research.
- 4. Deformable body and fluid mechanics.
- 5. Solid-state nanostructures. Physics of magnetic and ferroelectric phenomena. Semiconductors and semiconductor structures. Microwave solid-state devices.
- 6. Fundamental nuclear physics. Cosmic-ray physics and the nuclear aspects of astrophysics. Nuclear physics issues.
- 7. Fundamental issues of material-radiation interaction.
- 8. Issues of information transfer, acquisition, processing, and storage. Radioelectronic device electromagnetic compatibility.
- 9. High-temperature processes in chemistry and materials science.
- 10. Catalysis, phase equilibrium, physical and chemical processes in solutions, melts, and solid bodies.
- 11. Surface phenomena, colloidals, and nanoparticles, and clusters.
- 12. Directed synthesis and extraction of physiologically active chemical compounds and special-purpose substances. Bioactive natural and non-natural substances and low-molecular bioregulators.
- 13. Ecological, physiological, physical and chemical foundations of interaction between biosystems and the environment.
- 14. Soil genesis and evolution influenced by natural and anthropogenic factors.
- 15. Deep structure of the Earth's crust, geodynamics, magma generation and deposit generation, and accumulation conditions in the Precambrian in platform sedimentary basins and fold belts.
- 16. Ecological and geographical aspects of the interaction between society and the environment.
- 17. The scientific foundation of social and economic policies and business practice.



- 18. Economics management system: emergence and development.
- 19. Individuals as subjects of social change: social, humanitarian, and psychological issues.
- 20. Archaeology and ethnography of the Central Black Earth Region.
- 21. Russian and European History.
- 22. International literature and languages and their interaction. The issue of international communication.
- 23. A contrastive-comparative study of Germanic, Romance, and Slavic languages and cultures.
- 24. Mass media history, theory and practice.
- 25. The Russian state and its legal framework: modern development, concerns, and prospects.
- 26. Educational processes in the changing sociocultural environment, acmeology.
- 27. Social and political processes, crises, conflicts.
- 28. The theory, methodology, and policies of accounting, analysis, and monitoring the activity of economic entities.

## THERE ARE 41 ACADEMIC AND SCIENTIFIC SCHOOLS AT VSU:

#### 1. Topological methods in nonlinear analysis

Founded by Professor Yu. G. Borisovich, DSc in Physics and Mathematics, Honoured Scientist of the Russian Federation

Head Researcher - Professor V. G. Zvyagin, DSc in Physics and Mathematics

#### 2. Mathematical analysis

Head Researcher - Professor E. M. Semenov, DSc in Physics and Mathematics

3. Differential equations, optimal management and nonlinear oscillation theory Head Researcher – Professor A. I. Perov, DSc in Physics and Mathematics

## 4. Qualitative methods for boundary value problems in complex environment and spatial networks

Founded by Professor Yu. V. Pokorny, DSc in Physics and Mathematics, Honoured Scientist of the Russian Federation

#### 5. Solid mechanics

Head Researcher – Professor A. N. Sporykhin, DSc in Physics and Mathematics, Honoured Scientist of the Russian Federation

## 6. Theoretical physics (fundamental issues of interaction of optical radiation with atoms and molecules)

Head Researcher – Professor B. A. Zon, DSc in Physics and Mathematics, Honoured Scientist of the Russian Federation

#### 7. Radiophysics (enhancing electromagnetic compatibility of radio-electronic equipment by improving the radio receiving equipment and its elements)

Head Researcher – Professor E. K. Algazinov, DSc in Physics and Mathematics

## 8. Statistical informatics and radiophysics

Head Researcher – Professor A. P. Trifonov, DSc in Technical Sciences, Honoured Scientist of the Russian Federation

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## 9. Photostimulated processes on crystals with ion and covalent bonds

Head Researcher – Professor A. N. Latyshev, DSc in Physics and Mathematics

## 10. Electron structure of condensed matter

Head Researcher – Professor E. P. Domashevskaya, DSc in Physics and Mathematics, Honoured Scientist of the Russian Federation, Assosiate member of the Russian Academy of Sciences

## 11. Nuclear and condensed matter physics

Head Researcher – Professor S. G. Kadmensky, DSc in Physics and Mathematics, Honoured Scientist of the Russian Federation

# 12. Chemistry (directed synthesis of physiologically active chemical compounds, polymer, and their special-purpose dispersion)

Head Researcher – Professor G. V. Shatalov, DSc in Chemistry

13. Chemistry of solids and semiconductors, and processes in them and on the surface

Founded by Professor Ya. A. Ugai, DSc in Chemistry, USSR National Prize in Science laureate, Honoured Scientist of the Russian Federation, Full Member of the International Academy of Higher Education

## 14. Chemistry of ion-exchange and membrane processes

Head Researcher – Professor V. F. Selemenev, DSc in Chemistry, Honoured Scientist of the Russian Federation

## 15. Electrochemistry and electrochemistry of alloys

Founded by Professor I. K. Marshakov, DSc in Chemistry, Honoured Scientist of the Russian Federation

## 16. Solid state chemistry (physicochemistry of heterogeneous equilibria)

Head Researcher – Professor E. G. Goncharov, DSc in Chemistry

## 17. Biophysics (the functioning of complex (oligomeric) protein systems in various microenvironments)

Head Researcher – Professor V. G. Artyukhov, DSc in Biology, Honoured Scientist of the Russian Federation

# 18. Invertebrate animal classification, fauna and ecology: entomology, ecology, hydrology, and parasitology

Head Researcher – Professor O. P. Negrobov, DSc in Biology

## 19. Plant metabolism organization and regulation

Head Researcher – Professor A. T. Epryntsev, DSc in Biology, Honoured Scientist of the Russian Federation

## 20. Soil studies (anthropogenic evolution of black soils)

Founded by Professor A. P. Scherbakov, DSc in Biology, Full Member of the Russian Academy of Agricultural Sciences, a State Prize of the Russian Federation laureate, Honoured Scientist of the Russian Federation

Head Researcher – Professor D. I. Scheglov, DSc in Biology

## 21. Soil studies (soil genesis, evolution, structure, and biospheric functions)

Founded by Professor B. P. Akhtyrtsev, DSc in Biology, Honoured Scientist of the Russian Federation

Head Researcher – Professor T. A. Devyatova, DSc in Biology

## 22. Geodynamics, magmatism and metallogeny of the Early Precambrian history of the Earth

Head Researcher – Professor N. M. Chernyshov, DSc in Geology, Associate Member of the Russian Academy of Sciences, Honoured Scientist of the Russian Federation The school is ranked among the top scientific schools of the Russian Federation (in 2008– 2009 was included into state support programme for the leading scientific schools in Russia)

## 23. Lithology and minerals of ancient platforms

Head Researcher – Professor A. D. Savko, DSc in Geology, Honoured Geologist of the Russian Federation



## 24. History

Head Researcher - Professor A. Z. Vinnikov, DSc in History

#### 25. History

Head Researcher - Professor M. D. Karpachev, DSc in History, Honoured Scientist of the **Russian Federation** 

## 26. Archaeology. East European Forest-steppe archaeology

Head Researcher – Professor A. D. Pryakhin, DSc in History, Honoured Scientist of the Russian Federation

#### 27. Economics theory and the world economy

Founded by Professor Yu. I. Khaustov, DSc in Economics

### 28. Labour market research methodology

Head Researcher - Professor I. T. Korogodin, DSc in Economics

#### 29. Management

Founded by Professor V. N. Eytington, PhD in Economics, Honoured Economist of the Russian Federation

#### 30. Philosophy Philosophy of Science

Head Researcher - Professor A. S. Kravetz, DSc in Philosophy, Honoured Scientist of the **Russian Federation** 

#### 31. Russian literature studying and teaching

Head Researcher - Professor V. M. Akatkin, DSc in Philology, Honoured Scientist of the Russian Federation

#### 32. Literary studies (literary anthropology and author's role in Russian literature of the 19th century)

Founded by Professor B. T. Udodov, DSc in Philology, Honoured Scientist of the Russian Federation

#### 33. History of journalism

Head Researcher - Professor L. E. Kroichik, DSc in Philology

#### 34. Linguistics. Slavic onomastics

Head Researcher - Professor G. F. Kovalev, DSc in Philology

## 35. Linguistics (Romance and Germanic languages)

Founded by Professor Yu. A. Rylov, DSc in Philology

#### 36. World and Russian linguistics

Head Researcher – Professor Z. D. Popova, DSc in Philology, Honoured Scientist of the Russian Federation

37. Physical geography, geophysics, and landscape geochemistry Head Researcher – Professor V. I. Fedotov, DSc in Geography

### 38. Legal science

Head Researcher – Professor Yu. N. Starilov, DSc in Law, Honoured Scientist of the Russian Federation

#### 39. Pedagogical sciences

Head Researcher - Professor N. I. Vyunova, DSc in Pedagogics

#### **40. Political Sciences**

Head Researcher - Professor A. V. Glukhova, DSc in Politics

#### 41. Physicochemistry and technology of thin-film materials and nanomaterials

Head Researcher – Professor V. M. levlev, DSc in Physics and Mathematics, Full Member of the Russian Academy of Sciences

The school is ranked among the top scientific schools of the Russian Federation (in 2006-2010 was included into state support programme for the leading scientific schools in Russia)



5.6. RESEARCH PROJECTS CARRIED OUT AT VSU WITHIN THE FRAMEWORK OF THE FEDERAL TARGET PROGRAMME, THE RUSSIAN FOUNDATION FOR HUMANITIES GRANT, AND THE RUSSIAN FOUNDATION FOR BASIC RESEARCH GRANT

## SCIENTIFIC RESEARCH AS A CORE PART OF THE GOVERNMENT ORDER OF THE MINISTRY OF EDUCATION AND SCIENCE OF THE RUSSIAN FEDERATION (20 PROJECTS)

1019 Research project No.14006 for 2014–2016

Studying atomic and molecular processes in a strong laser field

Head Researcher – Professor N. L. Manakov, DSc in Physics and Mathematics (Faculty of Physics, Department of Theoretical Physics)

848 Research project No.14007 for 2014-2016

Synthesis, structure, and properties of composites of membrane elements for the ultrapurification of hydrogen

Head researcher – Professor A. A. Maximenko, DSc in Physics and Mathematics (Science Park)

959 Research project No.14008 for 2014-2016

The role of enzymes of major and alternative metabolic pathways in adaptive cell responses of eukaryotic and prokaryotic organisms

Head Researcher – Professor A. T. Epryntsev, DSc in Biology (Faculty of Biology and Soil Sciences, Department of Biochemistry and Cell Physiology)

675 Research project No.14011 for 2014-2016

Kinetics and dynamics of physico-chemical processes with adsorption, electrochemical, and transport stages on metals, alloys, and nanostructured metal-polymer composites for further implementation in electrocatalysis, hydrogen energetics, and anticorrosion protection

Head Researcher – Professor A. V. Vvedensky, DSc in Chemistry (Faculty of Chemistry, Department of Physical Chemistry)

951 Research project No.14012 for 2014–2016

Developing methods and processes for analysing, separating and concentrating physiologically active substances using new polymer and composite nanomaterials

Head Researcher – Professor V. F. Selemenev, DSc in Chemistry (Faculty of Chemistry, Department of Analytical Chemistry)

1035 Research project No.14013 for 2014–2016

Expressive breathing control in case of disorders associated with oxidative stress Head Researcher – Professor V. N. Kalaev, DSc in Biology (Faculty of Biomedical Sciences Department of Genetics, Cytology and Bioengineering)

1122 Research project No.14014 for 2014–2016

Studying non-penetrating Rydberg states of atoms and molecules

Head Researcher – Professor V. E. Chernov, DSc in Physics and Mathematics (Faculty of Physics, Department of Mathematical Physics)



### 853 Research project No.14015 for 2014-2016

Studying ore-forming magmatic systems of non-ferrous and precious metals within the theory of general evolution of the Precambrian lithosphere in Central Russia (assessing the resources and exploration prospects)

Head Researcher – Professor N.M. Chernyshov, DSc in Geology, Associate Member of the Russian Academy of Sciences (Faculty of Geology, Department of Mineralogy, Petrology and Geochemistry)

#### 978 Research project No.14016 for 2014-2016

## Design and functioning principles of modern radio-electronic equipment based on the use of ultra-wideband signals

Head Researcher – Professor G. K. Uskov, DSc in Physics and Mathematics (Faculty of Physics, Department of Electronics)

#### 1296 Research project No.14017 for 2014–2016

Synthesizing nanosorbents and nanocontainers for drug substances using heterophase polymerization in the presence of new emulsifiers

Head Researcher – Professor G. V. Shatalov, DSc in Chemistry (Faculty of Chemistry, Department of High Molecular Compounds and Colloids)

#### 1546 Research project No.14018 for 2014–2016

Developing methods and processes for synthesizing new azapolyheterocycles using tandem and multicomponent aminoazol reactions

Head Researcher – Professor A. Yu. Potapov, DSc in Chemistry (Faculty of Chemistry, Department of Organic Chemistry)

#### 1226 Research project No.14020 for 2014–2016

Studying the optical properties of alkaline earth atoms and ions used in quantum metrology and quantum information systems

Head Researcher – Professor V. D. Ovsyannikov, DSc in Physics and Mathematics (Faculty of Physics, Department of Materials Science and Nanosystems Industry)

#### 1606 Research project No.14021 for 2014–2016

Functional nanomaterials synthesis, analysis and precision diagnostics based on various methods, including synchrotron radiation

Head Researcher – Professor S. Yu. Turischev, PhD in Physics and Mathematics (Faculty of Physics, the Department of solid-state physics and nanostructures)

1230 Research project No.14022 for 2014–2016

Studying optical properties and photodynamic response in colloid quantum dots conjugated with dye molecules

Head Researcher – Associate Professor M. S. Smirnov, PhD in Physics and Mathematics (Faculty of Physics, Department of Optics and Spectroscopy)

1110 Research project No.14024 for 2014–2016

Studying the spectral theory of operators, linear order relation, and function theory

Head Researcher – Professor A. G. Baskakov, DSc in Physics and Mathematics (Faculty of Applied Mathematics, Informatics and Mechanics, Department of Mathematical Methods of Operations Research)

#### 1090 Research project No.14020 for 2014–2016

Studying the regulation mechanisms of the antioxidant status and functioning of human immunocompetent cells under oxidative stress

Head Researcher – Associate Professor A. A. Agarkov, PhD in Biology (Faculty of Biomedical Sciences Department of Medical Biochemistry and Microbiology)



740 Research project No.14026 for 2014–2016

Functional nano- and heterostructures design and diagnostics based on next-generation optoelectronics – A3B5 semiconductors and silicon

Head Researcher – Professor P. V. Seredin, DSc in Physics and Mathematics (Faculty of Physics, Department of Solid-State Physics and Nanostructures)

1012 Research project No.14097 for 2014–2016

Studying the effect of strong electromagnetic radiation (harsh synchrotron radiation and high temperature radiation) on the properties of atomic and nuclear systems

Head Researcher – Professor I. V. Kopytin, DSc in Physics and Mathematics (Faculty of Physics, Department of Materials Science and Nanosystems Industry)

1649 Research project No.14098 for 2014–2016

Theory and practice of nuclear fission and radioactive decay emitting nucleons, light nuclei, and gamma-quanta for optimization of nuclear physics processes

Head Researcher – Professor S. G. Kadmensky, DSc in Physics and Mathematics (Faculty of Physics, Department of Nuclear Physics)

1390 Research project No.14096 for 2014–2016

Studying the molecular interaction processes in multiple-component systems containing organic and inorganic polymer sorbents and highly mineralised solutions of amino acids, vitamins, and organic dyes

Head Researcher – Associate Professor V. Yu. Khokhlov, DSc in Chemistry (Faculty of Chemistry, Department of Analytical Chemistry)

## SCIENTIFIC RESEARCH CARRIED OUT WITHIN THE PROJECT ORIENTED PART OF THE GOVERNMENT ORDER OF THE MINISTRY OF EDUCATION AND SCIENCE OF THE RUSSIAN FEDERATION (8 PROJECTS)

6.2477.2014/K Research project No.14069 for 2014–2016

Studying the free-radical homeostasis and correction of its disturbances resulting from rheumatic arthritis

Head Researcher – Professor T. N. Popova, DSc in Biology (Faculty of Biomedical Sciences Department of Medical Biochemistry and Microbiology)

3.1306.2014/K Research project No.14068 for 2014-2016

Studying the many-body effect from atom and diatomic molecules interaction with electromagnetic impulses

Head Researcher – Professor B. A. Zon, DSc in Physics and Mathematics (Faculty of Physics, Department of Mathematical Physics)

4.2100.2014/K Research project No.14067 for 2014-2016

New linear and condensed heterocyclic systems based on functionally substituted hydroquinols: developing synthesising methods and studying physiological activity

Head Researcher – Professor Kh.S. Shikhaliev, DSc in Chemistry (Faculty of Chemistry, Department of Organic Chemistry)

3.1868.2014/K Research project No.14065 for 2014–2016

Theory and practice in studying the nature of interatomic interactions and electron energy spectrum in metal-oxide nanocomposites using X-ray and electronic spectroscopy with synchrotron radiation

Head Researcher – Professor E. P. Domashevskaya, DSc in Physics and Mathematics (Faculty of Physics, Department of Solid-State Physics and Nanostructures)



1.1539.2014/K Research project No.14072 for 2014–2016

Studying mathematical problems of non-Newtonian hydrodynamics

Head Researcher – Professor V. G. Zvyagin, DSc in Physics and Mathematics (Mathematics Research Institute)

4.225.2014/K Research project No.14070 for 2014–2016

Studying the effect of chemostimulating dopants on the oxidation process of A3B5 semiconductor compounds (GaAs, InAs, GaP, InP) and developing new processes for growing films on them, which films would be of nanoscale thickness and could be used for various purposes

Head Researcher – Professor I. Ya. Mittova, DSc in Chemistry (Faculty of Chemistry, Department of Materials Science and Nanosystems Technologies)

3.130.2014/K Research project No.14066 for 2014–2016

Developing physical and technical approaches for the design and diagnostics of epitaxiallyintegrated AllIBV/Si heterostructures

Head Researcher – Associate Professor P.V. Seredin, DSc in Physics and Mathematics (Faculty of Physics, Department of Solid-State Physics and Nanostructures)

6.149.2014/K Research project No.14071 for 2014-2016

Reactive oxygen intermediates' metabolism in mitochondria with various pathologies Head Researcher – Professor V. N. Popov, DSc in Biology (Faculty of Biomedical Sciences

Department of Genetics, Cytology and Bioengineering)

## GOVERNMENT ORDER (INTERNATIONAL DEPARTMENT OF THE MINISTRY OF EDUCATION AND SCIENCE OF THE RUSSIAN FEDERATION) (2PROJECTS)

34.691.2016/DAAD Research project No. 16033 for 2016

Carrying out research within the framework of the international scientific and educational partnership programme "Immanuel Kant" on studying the "Prosodic and paralinguistic tools used to render the meaning 'Congratulation' in Russian and in German languages"

Head researcher – O. A. Yartseva (Faculty of Romance and Germanic Philology, Department of German Philology)

1.759.2016/DAAD Research project No. 16032 for 2016

Carrying out research within the framework of the international scientific and educational partnership programme "Mikhail Lomonosov" on studying the "Modelling and regulation for linear distributed parameter systems"

Head Researcher – Associate Professor A.V. Dylevsky, DSc in Technical Sciences (Faculty of Applied Mathematics, Informatics and Mechanics, Department of Technical Cybernetics and Control Theory)

## GRANTS OF THE PRESIDENT OF THE RUSSIAN FEDERATION TO SUPPORT YOUNG RUSSIAN SCIENTISTS WITH PHD DEGREES (4 PROJECTS)

MK-3317.2015.7 Research project No.15014 for 2015–2016

Methodological aspects of developing new dosage forms based on microcapsules Head Researcher – Associate Professor Yu. A. Polkovnikova, PhD in Pharmacy (Faculty of Pharmaceutics, Department of Pharmaceutics for postgraduate students)





MK-6560.2015.6 Research project No.15018 for 2015-2016

Legal innovations in securing the right to access information in criminal proceedings Head Researcher – M. V. Gorsky, PhD in Law (Faculty of Law, Department of Criminalistics)

MK-3733.2015.5 Research project No.15013 for 2015-2016

Conservation of medicinal plants considering the growing level of anthropogenic pressure Head Researcher – Associate Professor N. A. Diakova, PhD in Biology (Faculty of Pharmaceutics, Department of Pharmaceutics for postgraduate students)

MK-4865.2016.2 Research project No.16042 for 2016-2017

Control of the morphology, surface structure, and functional properties of silicon-based lowdimensional oxide systems

Head Researcher – A. S. Lenshin, PhD in Physics and Mathematics (Faculty of Physics, Department of Solid-State Physics and Nanostructures)

## GRANTS OF THE PRESIDENT OF THE RUSSIAN FEDERATION TO SUPPORT YOUNG RUSSIAN SCIENTISTS WITH DSC DEGREES (1 PROJECT)

MD-7902.2016.9 Research project No.16041 for 2016–2017

Developing the methods for ultra-wideband radioelectronic and location systems using ultra-short impulse signals of nano and subnanosecond duration

Head Researcher – Professor G. K. Uskov, DSc in Physics and Mathematics (Faculty of Physics, Department of Electronics)

## FEDERAL TARGET PROGRAMME "RESEARCH AND DEVELOPMENT IN TOP-PRIORITY AREAS OF SCIENCE AND TECHNOLOGY IN RUSSIA FOR 2014–2020" (5 PROJECTS)

14.577.21.005 Research project No.14064 for 2014–2016

Developing technological solutions for the formation of nanostructured hybrid membranes that can be used to create potentiometric multisensor systems for reagentless monitoring of water

Head Researcher – Professor O. V. Bobreshova, DSc in Chemistry (Faculty of Chemistry, Department of Analytical Chemistry)

14.574.21.0093 Research project No. 14104 for 2014-2016

Development and upgrading of nuclear and X-ray diagnostic methods for nanomaterials Head Researcher – Professor E. P. Domashevskaya, DSc in Physics and Mathematics (Faculty of Physics, Department of Solid-State Physics and Nanostructures)



## 14.593.21.0111 Research project No.14103 for 2014–2016

New technology and equipment development for the production of nanoscale magnesian powders from salvaged enriched amorphous magnesite

Head Researcher – Professor V. F. Selemenev, DSc in Chemistry (Faculty of Chemistry, Department of Analytical Chemistry)

#### 14.574.21.0112 Research project No. 14105 for 2014–2016

Development of a programming and computing suite for the computer modelling of structural, sorption, and electronic properties of fullerenes and carbon nanotubes and adsorption processes

Head Researcher – Professor E. V. Butyrskaya, DSc in Chemistry (Faculty of Chemistry, Department of Analytical Chemistry)

#### 14.577.21.0182 Research project No.15054 for 2015–2017

Development of energy-saving technologies used in the process of production of emulsifiers and emulsifying systems for food and non-food industries based on raw materials and their derivative products

Head Researcher – Professor Kh. S. Shikhaliev, DSc in Chemistry (Faculty of Chemistry, Department of Organic Chemistry)

## RUSSIAN SCIENCE FOUNDATION GRANT FOR CONDUCTING BASIC RESEARCH AND PILOT STUDY BY SMALL RESEARCH GROUPS (4 PROJECTS)

14-12-00583 Research project No.14062 for 2014–2016

Production and study of new functional ferroelectric and multiferroic materials with custom electrical, magnetic, and mechanical properties

Head Researcher – Professor A.S. Sidorkin, DSc in Physics and Mathematics (Faculty of Physics, Department of Experimental Physics)

14-13-01470 Research project No.14063 for 2014–2016

Synthesis, electromigration, surface properties, and reactivity of modified nanoheterogeneous sensing materials based on semiconductor oxides with various morphologies

Head Researcher – Professor V.M. levlev, DSc in Chemistry (Faculty of Chemistry, Department of Materials Science and Nanosystems Technologies)

#### 14-14-00721 Research project No.14061 for 2014–2016

Free-radical, molecular and enzymic mechanisms for coordinating the tricarboxylic acid cycle and the glyoxylate cycle in the adaptive responses of plant cells' metabolism to anthropogenic changes in the biosphere

Head Researcher – Professor A.T. Epryntsev, DSc in Biology (Faculty of Biology and Soil Sciences, Department of Biochemistry and Cell Physiology)

#### 16-11-10125 Research project No. 16056 for 2016–2018

Operator equations in spaces of function and applications of nonlinear analysis

Head Researcher – Professor E. M. Semenov, DSc in Physics and Mathematics (Faculty of Mathematics, Department of Geometry and Functional Theory)



## RUSSIAN SCIENCE FOUNDATION GRANT FOR CONDUCTING BASIC RESEARCH AND SCIENTIFIC SEARCH BY ESTABLISHED LABORATORIES (1 PROJECT)

14-21-00066 Research project No.14073 for 2014–2016

Functional analysis methods for studying the problems of equations of mathematical physics Head Researcher – Professor V. G. Zvyagin, DSc in Physics and Mathematics (Mathematics Research Institute)

## RUSSIAN SCIENCE FOUNDATION GRANT FOR CONDUCTING BASIC RESEARCH AND PILOT STUDY WITH PARTICIPATION OF YOUNG SCIENTISTS (2 PROJECTS)

15-13-10036 Research project No.15019 for 2015–2017

Development of new potentiometric sensors based on hybrid membranes for the express analysis of aminoacids and vitamins in water and nutritional solutions

Head Researcher – Professor O. V. Bobreshova, DSc in Chemistry (Faculty of Chemistry, Department of Analytical Chemistry)

15-11-10022 Research project No.15024 for 2015–2017

Statistical methods of signal location and extent of signal detection for signals and images in the domain of their existence

Head Researcher – Professor A. P. Trifonov, DSc in Technical Sciences (Faculty of Physics, Department of Radiophysics)

## RUSSIAN SCIENCE FOUNDATION GRANT FOR CONDUCTING BASIC RESEARCH AND A PILOT STUDY IN TOP PRIORITY SPECIAL RESEARCH AREAS (3 PROJECTS)

15-15-00137 Research project No.15016 for 2015-2017

Investigation of amniotic lavage mechanism in the treatment of threatened premature delivery of infectious genesis

Head Researcher – Professor M. N. Chirikov, DSc In Medicine (Faculty of Biomedical Sciences, Department of Genetics, Cytology and Bioengineering)

16-14-00176 Research project No. 16005 for 2016–2018

Studying and genetic certification of agriculturally significant insects and mites, followed by the genomic selection of pollinating insects and entomophages

Head Researcher – Professor V. N. Popov, DSc in Biology (Faculty of Biomedical Sciences Department of Genetics, Cytology and Bioengineering)



16-15-00003 Research project No.16003 for 2016-2018

Developing effective methods for preventive dental care based on normalization of metabolism of the dental hard tissues in vivo using biochemical materials with high remineralization potential

Head Researcher – Professor P.V. Seredin, DSc in Physics and Mathematics (Faculty of Physics, Department of Solid-State Physics and Nanostructures)

# THE RUSSIAN FOUNDATION FOR BASIC RESEARCH GRANTS (68 PROJECTS)

## **INITIATIVE PROJECTS**

14-05-00722 Research project No.14031 for 2014–2016

Monitoring the region and mapping the ecological and geochemical factors influencing the health of the people living in the Central Black Earth Region

Head Researcher – Professor S. A. Kurolap, DSc in Geography (Faculty of Geography, Geoecology and Tourism, Department of Geoecology and Environmental Monitoring)

## 14-02-00516 Research project No.14035 for 2014–2016

## Atomic and ion optical frequency standards

Head Researcher – Professor V. D. Ovsyannikov, DSc in Physics and Mathematics (Faculty of Physics, Department of Materials Science and Nanosystems Industry)

14-04-00264 Research project No.14032 for 2014–2016

Dolichopodidae (Diptera) classification, fauna and genesis in Russia and neighbouring territories

Head Researcher – Professor O. P. Negrobov, DSc in Biology (Faculty of Biomedical Sciences, Department of Ecology and Systematics of Invertebrates)

## 14-01-00141 Research project No.14038 for 2014–2016

Functional Banach spaces geometry and operator classes

Head Researcher – Professor E. M. Semenov, DSc in Physics and Mathematics (Faculty of Mathematics, Department of Geometry and Functional Theory)

## 14-07-00713 Research project No.14030 for 2014–2016

Studying and developing methods for the control of information transfer in wireless sensor networks and telecommunications networks similar to physical processes of matter and energy transfer in order to enhance stability, capacity and energy efficiency of wireless networks

Head Researcher – Professor Yu. B. Nechaev, DSc in Physics and Mathematics (Faculty of Computer Sciences, Department of Information Systems)

## 14-04-00805 Research project No.14037 for 2014–2016

The role of intracellular calcium and expression of the PIF3 transport factor in the phytochrome signal transduction; the importance of methylation of succinate dehydrogenase subunits' gene promoters in plants with changing lighting conditions and nutrition type

Head Researcher – Professor A. T. Epryntsev, DSc in Biology (Faculty of Biology and Soil Sciences, Department of Biochemistry and Cell Physiology)

## 14-01-00867 Research project No.14039 for 2014–2016

Management problems in mathematical models of a complex physical medium

Head Researcher – Professor A. D. Baev, DSc in Physics and Mathematics (Faculty of Mathematics, Department of Mathematical Analysis)



14-08-00610 Research project No. 14033 for 2014–2016 Percolation effects in metal-polymer nanocomposites as the basis for a new technology for the complete protection of water heating systems from oxygen-type corrosion Head Researcher – Professor T. A. Kravchenko, DSc in Chemistry (Faculty of Chemistry, Department of Physical Chemistry)

#### 14-02-00666 Research project No.14034 for 2014-2016

#### Creep and sliding of domain walls in low dimensional ferroelectrics

Head Researcher – Professor A. S. Sidorkin, DSc in Physics and Mathematics (Faculty of Physics, Department of Experimental Physics)

15-06-06295 Research project No.15009 for 2015-2017

Modelling the sustainable development process of social and economic systems based on a tool for managing the functioning, evolution and interaction of social and economic objects, taking into account energy conservation and energy efficiency

Head Researcher – Professor N. P. Lyubushin, DSc in Economics (Faculty of Economics, Department of Economic Analysis and Audit)

15-03-09186 Research project No.15012 for 2015-2017

Comparative analysis of the growth, structure and properties of calcium phosphate coating on titanium during magnetron sputtering and biomimetic deposition

Head Researcher – Professor V. M. levlev, DSc in Chemistry (Faculty of Chemistry, Department of Materials Science and Nanosystems Technologies)

15-07-05341 Research project No.15010 for 2015–2017

Basic models of distributed logical systems for the intelligent processing of large amounts of data

Head Researcher – Associate Professor S. D. Makhortov, DSc in Physics and Mathematics (Faculty of Applied Mathematics, Informatics, and Mechanics, Department of Computer Software Support)

15-02-03402 Research project No.15005 for 2015–2017

Describing dual, triple and tetradic fission and 2-proton decay as multistage nuclear processes

Head Researcher – Professor S. G. Kadmensky, DSc in Physics and Mathematics (Faculty of Physics, Department of Nuclear Physics)

15-02-04280 Research project No.15006 for 2015–2017

Developing methods for control of the luminescence properties of Ag2S colloid quantum dots in various environment

Head Researcher – Professor O.V. Ovchinnikov, DSc in Physics and Mathematics (Faculty of Physics, Department of Optics and Spectroscopy)



15-08-05031 Research project No.15011 for 2015-2017

The influence of temperature on the transport-structural parameters of heterogeneous ion-exchange membranes and on the electrical convection during electrodialysis of high-intensity current mode

Head Researcher – Professor V. I. Vasilieva, DSc in Chemistry (Faculty of Chemistry, Department of Analytical Chemistry)

## 15-04-03749 Research project No.15008 for 2015-2017

Molecular and boichemical basis of the mechanism of catabolic pathway of thiosulfate oxidation by sulphur bacteria

Head Researcher – Professor M. Yu. Grabovich, DSc in Biology (Faculty of Biology and Soil Sciences, Department of Biochemistry and Cell Physiology)

## 15-01-05315 Research project No.15003 for 2015–2017

Indefinite space operators and their application

Head Researcher – Pprofessor T. Ya. Azizov, DSc in Physics and Mathematics (Faculty of Mathematics, Department of Geometry and Functional Theory), Associate Professor M. S. Denisov, PhD in Physics and Mathematics (Faculty of Mathematics, Department of Geometry and Functional Theory)

## 15-04-02326 Research project No.15007 for 2015–2017

Studying the taxonomy of existing and ancient Tingoidea (Heteroptera) of the Eastern Palearctic and analysing their zoogeography, paleogeography, evolution, and phylogeny Head Researcher – professor V. B. Golub, DSc in Biology (Faculty of Biomedical Sciences,

Department of Ecology and Systematics of Invertebrates)

## 15-01-00620 Research project No.15004 for 2015–2017

Developing stochastic and global analysis methods in order to study equations and inclusions with mean derivatives and their application

Head Researcher – Professor Yu. E. Gliklikh, DSc in Physics and Mathematics (Faculty of Mathematics, Department of Algebra and Topological Analysis Methods)

## 16-07-01238 Research project No.16018 for 2016–2018

Developing methods and equipment for high-speed radio communication based on ultrashort impulse signals of nano and subnanosecond duration

Head Researcher – Professor A. M. Bobreshov, DSc in Physics and Mathematics (Faculty of Physics, Department of Electronics)

## 116-05-00975 Research project No.16029 for 2016–2017

3D comprehensive geophysical model of Voronezh crystalline upper and middle crust

Head Researcher – Professor V. N. Glaznev, DSc in Geology (Faculty of Geology, Department of Geophysics)

## 16-06-00535 Research project No.16014 for 2016-2018

Developing a set of mathematical optimisation models and algorithms in order to enhance the efficiency of management of the region's labour market and employment of population Head Researcher – Professor T. V. Azarnova, DSc in Physics and Mathematics (Faculty of Mathematics, Department of Mathematical Methods of Operations Research)

16-02-01167 Research project No. 16016 for 2016-2018

Basic research of atomic and electronic structure of hybrid nanomaterial bakterioferritin Dps and derivative structures

Head Researcher – Associate Professor S. Yu. Turischev, DSc in Physics and Mathematics (Faculty of Physics, Department of Solid-State Physics and Nanostructures)



16-05-01044 Research project No.16022 for 2016-2018

Fluid evolution during metamorphism in Archaean ferruginous-siliceous formations Head Researcher – Associate Professor S. M. Pilyugin, DSc in Geology (Faculty of Geology, Department of Mineral Resources and Mineral Management Studies)

## 16-06-00390 Research project No.16015 for 2016-2018

Mathematical characterization of circular economy principles followed by the development and testing of models that take into account the law's influence on the going concern, efficient use of resources, and sustainable development of economic systems

Head Researcher – Professor N. E. Babicheva, DSc in Economics (Faculty of International Relations, Department of International Economics and International Business)

#### 16-01-00197 Research project No.16028 for 2016-2018

Methods of representation theory for groups, semigroups and Banach algebras in the spectral analysis of linear functions and linear operators

Head Researcher – Professor A. G. Baskakov, DSc in Physics and Mathematics (Faculty of Mathematics, Department of Nonlinear Oscillations)

#### 16-01-00370 Research project No.16017 for 2016–2018

Development and application of topological methods for nonlinear analysis

Head Researcher – Professor V. G. Zvyagin, DSc in Physics and Mathematics (Faculty of Mathematics, Department of Algebra and Topological Analysis Methods)

#### 16-04-01014 Research project No.16030 for 2016-2018

Modulation of mitochondrial respiration and reactive oxygen intermediates' metabolism by means of alternative electron transport

Head Researcher – Professor V. N. Popov, DSc in Biology (Faculty of Biomedical Sciences Department of Genetics, Cytology, and Bioengineering)

16-05-01063 Research project No.16021 for 2016–2018

Acoustic wave conversion methods applied to noise interferometry problems in the nondeep sea

Head Researcher – Associate Professor B. G. Kaznelson, DSc in Physics and Mathematics (Faculty of Physics, Department of Mathematical Physics)

# CONTEST OF BASIC RESEARCH PROJECTS, ORGANISED BY THE RUSSIAN FOUNDATION FOR BASIC RESEARCH AND THE VORONEZH REGION

16-46-360686 Research project No. 16044 for 2016–2017

The Voronezh region social and economic development information analysis system

Head Researcher – Professor N. V. Yakovenko, DSc in Geography (Faculty of Geography, Department of Human Geography and Regional Studies)



### 16-46-360267 Research project No.16052 for 2016–2017

Scientific foundation for informal employment research and forecasting in the Voronezh region Head Researcher – Professor A. A. Fedchenko, DSc in Economics (Faculty of Economics, Department of Labour Economics and Management Fundamentals)

## 16-42-360612 Research project No.16051 for 2016–2017

Synthesis, modification, atomic and electron structure, and evolution of  $SnO_2$  filamentary nanocrystal properties.

Head Researcher – Associate Professor S. Yu. Turischev, DSc in Physics and Mathematics (Faculty of Physics, the Department of Solid-State Physics and Nanostructures)

#### 16-43-360281 Research project No.16050 for 2016-2017

The physical and chemical foundations of low-temperature synthesis of silicon-carbide nanostructures for use in the production of electronic components for equipment that has to operate in extreme conditions

Head Researcher – Associate Professor L. A. Bityutskaya, DSc in Physics and Mathematics (Faculty of Physics, Department of Semiconductor Physics and Microelectronics)

### 16-45-360284 Research project No.16049 for 2016–2017

The Voronezh region urbanised territories biotechnosphere monitoring as a factor of the region's sustainable development

Head Researcher – Associate Professor S. A. Epryntsev, PhD in Geography (Faculty of Geography, Geoecology, and Tourism, Department of Geoecology and Environmental Monitoring)

#### 16-42-360381 Research project No.16048 for 2016–2017

Development and research of synthesis and analysis techniques for components and assembly units of transmitter-receiver systems using ultra-wideband impulse signals

Head Researcher – Professor A. M. Bobreshov, DSc in Physics and Mathematics (Faculty of Physics, Department of Electronics)

16-45-360486 Research project No.16045 for 2016-2017

Geoinformation technologies for the monitoring and forecasting of natural hazards in Voronezh Region

Head Researcher – Professor S. A. Kurolap, DSc in Geography (Faculty of Geography, Geoecology, and Tourism, Department of Geoecology and Environmental Monitoring)

16-43-360595 Research project No.16043 for 2016–2017

GaAs, GaP, and InP surface modification as a method for controlling nanostructures and the optical electrophysical properties of nanoscale thickness oxide films for microelectronics

Head Researcher – Professor I. Ya. Mittova, DSc in Chemistry (Faculty of Chemistry, Department of Materials Science and Nanosystems Technologies)

16-42-360888 Research project No.16047 for 2016-2017

Generation and study of new ferroelectric nanomaterials with size dependable physical and chemical properties

Head Researcher – Professor A. S. Sidorkin, DSc in Physics and Mathematics (Faculty of Physics, Department of Experimental Physics)

#### 16-46-360424 Research project No.16046 for 2016-2017

#### The Voronezh region social and economic development forecasting methods and models

Head Researcher – Professor V. V. Davnis, DSc in Economics (Faculty of Economics, Department of Information Technology and Mathematical Methods for Economics)



# PROJECT CONTEST FOR ORGANISING LOCAL AND INTERNATIONAL EVENTS FOR YOUNG SCIENTISTS

16-31-10108 Research project No. 16036 for 2016

Project of the 27th spring school of Mathematics "Modern solutions to boundary value problems" in honour of Lev Pontryagin

Head Researcher – Professor A. D. Baev, DSc in Physics and Mathematics (Faculty of Mathematics, Department of Mathematical Analysis)

16-31-10005 Research project No. 16023 for 2016

Project of an international conference for young scholars "Voronezh Winter School of Mathematics in honour of S.G. Krein – 2016"

Head Researcher – Professor V. A. Kostin, DSc in Physics and Mathematics (Faculty of Mathematics, Department of Mathematical Modelling)

16-31-10339 Research project No. 16062 for 2016

Project of an international conference "Current issues in applied mathematics, informatics, and mechanics"

Head Researcher – Professor A. I. Shashkin, DSc in Physics and Mathematics (Faculty of Applied Mathematics, Informatics, and Mechanics, Department of Mathematical and Applied Analysis)

## ORGANISING AND HOLDING CONFERENCES AND OTHER SCIENTIFIC EVENTS IN RUSSIA

16-05-20028 Research project No. 16024 for 2016

Organising the 43rd international workshop in honour of D.G. Uspensky "Theory and practice of geologic interpretation of geophysical fields"

Head Researcher – Professor V. N. Glaznev, DSc in Geology (Faculty of Geology, Department of Geophysics)

16-03-20377 Research project No. 16037 for 2016

Project of the XI International meeting on physicochemical analysis in honour of Kurnakov

Head Researcher – Professor V. M. levlev, DSc in Chemistry (Faculty of Chemistry, Department of Materials Science and Nanosystems Technologies)

16-05-2065 Research project No. 16063 for 2016

Organising the XX International scientific conference "Deep structure, minerageny, modern geodynamics, and seismic activity of the East European Platform and its neighbouring territories"

Head Researcher – Professor N. M. Chernyshov, DSc in Geology, Associate Member of the Russian Academy of Sciences (Faculty of Geology, Department of Mineralogy, Petrology, and Geochemistry)



16-06-20677 Research project No. 16064 for 2016

Organising the 39th International Conference (Scientific Workshop) "Social and Economic Processes System Modelling" in honour of Professor S.S. Shatalin

Head Researcher – Associate Professor I. N. Schepina, DSc in Economics (Faculty of Economics, Department of Information Technology and Mathematical Methods for Economics)

16-06-20780 Research project No. 16077 for 2016

Project of the XII International scientific conference "Economic forecasting – models and methods"

Head Researcher – Professor V. V. Davnis, DSc in Economics (Faculty of Economics, Department of Information Technology and Mathematical Methods for Economics)

## CONTEST OF BASIC RESEARCH PROJECTS CARRIED OUT BY YOUNG SCIENTISTS WITH PHD OR DSC DEGREES IN SCIENTIFIC ORGANISATIONS OF THE RUSSIAN FEDERATION

16-31-60075 Research project No. 16001 for 2016-2018

Studying resolvability, attractors, and optimal feedback control in various tasks for non-Newtonian hydrodynamics

Head Researcher – A.V. Zvyagin, PhD in Physics and Mathematics, senior research fellow (Research Institute for Mathematics)

## JOINT INITIATIVE RESEARCH PROJECTS CONTEST OF THE RUSSIAN FOUNDATION FOR BASIC RESEARCH AND THE SCIENCE & TECHNOLOGY DEVELOPMENT FUND OF EGYPT

15-52-61017 Research project No.15017 for 2015–2016 Determining the properties of semiconductor nanocrystal chalcogenides with thin films and Sn, Zn and Cd oxides and their optimisation for flexible solar cells

Head Researcher – Professor E. P. Domashevskaya, DSc in Physics and Mathematics (Faculty of Physics, Department of Solid-State Physics and Nanostructures)

## CONTEST OF RESEARCH PROJECTS CARRIED OUT BY LEADING YOUNG SCIENTIST GROUPS

15-31-20241 Research project No.15020 for 2015-2016

Studying the problems of mathematical hydrodynamics and biology using the topological analysis methods

Head Researcher – S. K. Kondratiev, PhD in Physics and Mathematics, senior research fellow (Research Institute for Mathematics)

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## CONTEST OF RESEARCH PROJECTS CARRIED OUT BY YOUNG SCIENTISTS UNDER THE LEADERSHIP OF PHD AND DSC DEGREES HOLDERS

16-34-50049 Research project No. 16034 for 2016

Search for and experimental testing of high-affinity ligands and low-molecular substances as a cross-link for immobilisation of pharmaceutical prostheses

Head Researcher – Professor V. G. Artyukhov, DSc in Biology (Faculty of Biology and Soil Sciences, Department of Biophysics and Biotechnology)

16-32-50003 Research project No. 16007 for 2016

Studying the main properties of controlled self-organisation, self assembly, and superstructuring in epitaxial A3B5 solid solutions and their integration with silicon-based technologies Head Researcher – Professor P. V. Seredin, DSc in Physics and Mathematics (Faculty of Physics, Department of Solid-State Physics and Nanostructures)

#### 16-38-50029 Research project No. 16006 for 2016

Nanostructure, morphology, and phase composition of PdCu/Al<sub>2</sub>O<sub>3</sub> nanocomposite, synthesised using metal vacuum condensation on ceramics with ordered open nanoporosity Head Researcher – Professor E. K. Belonogov, DSc in Physics and Mathematics (Faculty of Chemistry, Department of Materials Science and Nanosystems Technologies)

16-32-50039 Research project No. 16008 for 2016

Phase transitions and polarisation changes in thin ferroelectric films of the lead titanate zirconate

Head Researcher – Professor A. S. Sidorkin, DSc in Physics and Mathematics (Faculty of Physics, Department of Experimental Physics)

16-31-50044 Research project No. 16059 for 2016

Application of covering mappings to studying the boundary value problems for differential inclusions

Head Researcher – Professor B. D. Gelman, DSc in Physics and Mathematics (Faculty of Mathematics, Department of Geometry and Functional Theory)

16-37-50078 Research project No. 16061 for 2016

Developing methods and algorithms for analysis of text's emotional tonality based on sentence diagramming

Head Researcher – Professor I. E. Voronina, DSc in Physics and Mathematics (Faculty of Applied Mathematics, Informatics, and Mechanics, Department of Software Development and Information Systems Administration)

## CONTEST OF BASIC RESEARCH PROJECTS CARRIED OUT BY GROUPS OF YOUNG RUSSIAN AND BELURUSSIAN SCIENTISTS, ORGANISED BY THE RUSSIAN FOUNDATION FOR BASIC RESEARCH AND THE BELURUSSIAN REPUBLICAN FOUNDATION FOR FUNDAMENTAL RESEARCH

15-52-04078 Research project No.15022 for 2015–2016

Femtosecond dynamics of electronic excitation decomposition in CdS colloid quantum dots in various environment

Head Researcher – Associate Professor M. S. Smirnov, PhD in Physics and Mathematics (Faculty of Physics, Department of Optics and Spectroscopy)



## RESEARCH PROJECTS CONTEST FOR YOUNG SCIENTISTS (MY FIRST GRANT)

## 16-32-00926 Research project No.16026 for 2016-2017

Spin polarization for electrons in clean and carbon doped ultrashort nanotubes within a stationary electric field

Head Researcher – G. I. Glushkov, post-graduate student (Faculty of Physics, Department of Semiconductor Physics and Microelectronics)

#### 16-32-00860 Research project No.16002 for 2016-2017

Ab initio modelling and parallel study of electronic energy structure of ultra-thin tin films Head Researcher – M. D. Manyakin, post-graduate student (Faculty of Physics, Department

of Solid-State Physics and Nanostructures)

#### 16-32-00503 Research project No.16019 for 2016–2017

Singlet oxygen photosensibilization by means of associates of thiazine dyes with Ag<sub>2</sub>S colloid quantum dots

Head Researcher – A. S. Perepelitsina, post-graduate student (Faculty of Physics, Department of Optics and Spectroscopy)

#### 16-32-00020 Research project No.16011 for 2016-2017

Structural and optic properties of nanoprofiled heterostructures based on A3B5, A3B6, and silicon semiconductors

Head Researcher – Associate Professor V. E. Ternovaya, PhD in Physics and Mathematics (Faculty of Physics, Department of Solid-State Physics and Nanostructures)

#### 16-31-00182 Research project No. 16009 for 2016-2017

Non-standard boundary value problems for non-Newtonian hydrodynamics models

Head Researcher – Associate Professor E. S. Baranovsky, PhD in Physics and Mathematics (Faculty of Applied Mathematics, Informatics, and Mechanics, Department of Software Development and Information Systems Administration)

## 16-31-00027 Research project No.16027 for 2016-2017

Studying mathematical physics problems with the help of spectral and topological methods Head Researcher – D. M. Polyakov, post-graduate student, research fellow (Research Institute for Mathematics)

#### 16-34-01141 Research project No.16012 for 2016-2017

Supramolecular control over structural and functional features of proteolytic enzymes – theory and practice

Head Researcher – Associate Professor M. Kholyavka, PhD in Biology (Faculty of Biology and Soil Sciences, Department of Biophysics and Biotechnology)

## 16-34-01097 Research project No.16010 for 2016–2017

Genomics, taxonomy, and metabolism of a new type of sulfur-oxidizing bacteria of Beggiatoaceae family

Head Researcher – E. V. Belousova, PhD in Biology, lecturer (Faculty of Biology and Soil Sciences, Department of Biochemistry and Cell Physiology)





16-34-01062 Research project No.16013 for 2016-2017

Studying the factors and principles of changes in the Dps E.coli functional activity in vitro and in vivo

Head Researcher – E. V. Preobrazhenskaya, post-graduate student (Faculty of Biology and Soil Sciences, Department of Biophysics and Biotechnology)

16-38-00572 Research project No. 16025 for 2016-2017

Electroconvective instability in stratified systems with heterogeneous ion-exchange membranes as a result of temperature modification

Head Researcher – E. M. Akberova, PhD in Chemistry, senior engineer (Faculty of Chemistry, Department of Analytical Chemistry)

### DIRECTED BASIC RESEARCH CONTEST FOCUSED ON CONTEMPORARY INTERDISCIPLINARY PROBLEMS

16-29-08342 Research project No.16058 for 2016–2018

Comparative analysis of cognitive stimulation based on human-computer interfaces (including brain-computer interfaces) and its effects on healthy users and users with neurological pathologies

Head Researcher – Professor S. D. Kurgalin, DSc in Physics and Mathematics (Faculty of Computer Sciences, Department of Information Systems)

## **RUSSIAN FOUNDATION FOR HUMANITIES GRANTS (9 PROJECTS)**

16-03-00291 Research project No.16054 for 2016–2018

Juridification as a legal regulation issue

Head Researcher – Associate Professor V. V. Denisenko, PhD in Law (Faculty of Law, Department of the Theory and History of State and Law)

16-14039/15 Research project No. 16053 for 2016

International scientific conference "Legal regulation – efficiency, legitimacy, and justice issues"

Head Researcher – Associate Professor V. V. Denisenko, PhD in Law (Faculty of Law, Department of the Theory and History of State and Law)

15-04-00250 Research project No.15021 for 2015–2017

Meaning as an aspect of active linguistic consciousness of the language speaker (theory and lexicography problems)

Head Researcher – Professor I. A. Sternin, DSc in Philology (Faculty of Philology, Department of General Linguistics and Stylistics)



15-06-10765 Research project No.15025 for 2015–2016

New organisations as a growth factor of creativity and innovative development of Russian cities within the framework of state social policy

Head Researcher – I. V. Shershen, PhD in Economics (Institute of Extramural Economic Education)

15-11-36005 Research project No.15027 for 2015–2016

Political and intellectual biography of M. L. Magnitsky – history of Russian conservatism

Head Researcher – Associate Professor A. Yu. Minakov, DSc in History (Faculty of History, Department of Russian History)

16-12-36007 Research project No.16040 for 2016–2017

Developing the methodology for analysis of municipal development areas and their influence on social and economic growth of the Voronezh region (by means of comprehensive analysis of the regional and municipal statistics databases)

Head Researcher – Associate Professor I. N. Schepina, DSc in Economics (Faculty of Economics, Department of Information Technology and Mathematical Methods for Economics)

16-04-00488 Research project No. 16055 for 2016-2018

Voronezh Region's culture in the middle of the XIX century (based on the Russian Geographical Society archive in St. Petersburg)

Head Researcher – Associate Professor T. F. Pukhova, PhD in Philology (Faculty of Philology, Department of Russian Literature of XX–XXI Centuries, the Theory of Literature, and Folklore)

16-01-00058 Research project No.16057 for 2016–2018

Formation of the landowning servicemen class in the southern parts of Russia in the XVII century

Head Researcher – Associate Professor E. V. Kamarauli, PhD in History (Faculty of History, Department of Political History)

16-11-36002 Research project No. 16038 for 2016-2017

Studying mounds in the lower reaches of the Elan River (Voronezh Region)

Head Researcher – Professor A. P. Medvedev, DSc in History (Faculty of History, Department of Archaeology and Ancient History

## RESEARCH, DEVELOPMENT, AND ENGINEERING PROJECTS BASED ON AGREEMENTS WITH ORGANISATIONS SUPPORTED BY GRANTS FOR THE REALISATION OF HI-TECH INTEGRATED PROJECTS (THE ORDER OF THE RUSSIAN GOVERNMENT No 218 DATED 9 APRIL, 2010)

76/FPK Research project No.16004 for 2016–2018

Creating hi-tech production of efficient multifunctional membrane units for high purity hydrogen evolution from hydrogen-containing gas mixtures

Head Researcher – Professor V. M. levlev, DSc in Chemistry (Faculty of Chemistry, Department of Materials Science and Nanosystems Technologies)



## 5.7. CENTRE FOR COLLECTIVE USE OF SCIENTIFIC EQUIPMENT

# PROJECT "DEVELOPING THE CENTRE FOR COLLECTIVE USE OF SCIENTIFIC EQUIPMENT"

In 2016, the key activities of the Centre for Collective Use of Scientific Equipment (the Centre) were the following:

Providing collective use services (using scientific equipment, setting up experiments, sample preparation, results analysis).

Conducting joint research projects with organisations that use the scientific equipment of the Centre.

Supporting hi-tech technologies and knowledge-intensive production, including projects within the framework of the Order of the Russian Government No 218 and FTP, conducted jointly with the industrial partners (OAO *Efirnoye*, OOO *Voronezhselmash*, ZAO VFSD *Micron*, OOO Centre for consulting services and innovative technological solutions for geology *Tsitrin*, and OOO Manufacturing Company *Tekhpromsyntez*).

A series of measures were taken in order to upgrade the Centre's laboratories and provide for the equipment maintenance.

1. Several items of the most modern scientific equipment were purchased and introduced:

- A PC controlled ultramicrotome PowerTome PC 75840, RMC Products (the USA).
- Malvern Zetasizer ZSP particle characterisation system (the UK).
- Akta Pure 150L chromatography system for fast purification of proteins (Sweden England).
- A Rotary-Pumped Sputter Coater Q 150R ES-Quorum (England).

2. Several items of the Centre's equipment were subject to regular maintenance:

- Thermo ARL X'TRA powder X-ray diffraction system (Thermo Fisher Scientifics, Switzerland).
- PANalytical Empyrean X-ray diffractometer (Netherlands).
- JSM-6380LV Series Scanning Electron Microscope (JEOL Ltd., Japan).



3. Air ventilation and air conditioning systems were upgraded in several of the Centre's laboratories:

- Nanoscopy and Nanotechnology Laboratory.
- Electron Microscopy Laboratory.

The scope of certification of the research laboratory was extended. The list of services the laboratory provides now includes a new measurement method using Bruker S8 Tiger X-ray diffractometer. The Centre's website was renovated.

During the two years of working on the project for developing the Centre of Collective Use of Scientific Equipment, which was supported by the Ministry of Education and Science of the Russian Federation, the number of the service areas grew to 7, and the total number of services grew to 64.

## 5.8. VSU INNOVATION FINANCIAL SUPPORT IN 2015–2016

In 2016, financing of Voronezh State University innovative activities included SIB revenues and amounted to 238,520.61 thousand roubles, including:

- 30 million roubles provided under the Order of the Russian Government No. 218 for the financing of corporate projects.
- 57,700 thousand roubles financing from federal target programmes (FTP).
- 5,940 thousand roubles financing from the Fund for Infrastructure and Educational Programmes (RUSNANO).
- 63.5 million roubles of revenue from VSU SIB products (activities, services).
- 68,650.00 thousand roubles from co-financing by industrial partners of projects covered by FTP and the Order of the Russian Government No. 218 (without withdrawal from current assets).
- 3,000.00 thousand roubles of VSU's own funds (projects co-financing).
- 6,000.00 thousand roubles from the Russian Science Foundation.

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- 2,796 610.17 Pharmacy.
- 934,000 administrative agreements.

The financial basis of Voronezh State University's innovative activities in 2016 included federal financing, VSU's own extra-budgetary funds, as well as funding from industrial companies and organisations.

See data for implemented innovation projects in Table 5.2.

Table 5.2

## IMPLEMENTED INNOVATION PROJECTS

No.	Projects	Industrial Partner	Head Researcher	Duration of the project							
Order of the Russian Government No 218											
1	Project "Hi-tech production of efficient multifunctional membrane units for high purity hydrogen evolution from hydrogen-containing gas mixtures"	OOO FPK Kosmos-Neft-Gaz	Full Member of the Russian Academy of Sciences, V. M. levlev	01.01.2016– 31.12.2018							
	The federal target programme "Research and Development in Top-Priority Areas of Science and Technology in Russia for 2014–2020"										
2	Activity 1.2 "Nanosystems Industry", the project "Development and Enhancement of Nanomaterials Nuclear Physical and X-ray Diagnostic Methods"	AO VZPP Micron	DSc in Physics and Mathematics, Professor E. P. Domashevskaya	11.08.2014– 31.12.2016							
3	Activity 1.2 "Nanosystems Industry", the project "Development of a Programming and Computing Suite for the Ccomputer Modelling of Structural, Sorption, and Electronic Properties of Fullerenes and Carbon Nanotubes and Adsorption Processes"	000 Manufacturing Company Tekhpromsyntez	DSc in Chemistry, Professor E. V. Butyrskaya	21.10.2014– 31.12.2016							
4	Activity 1.3 "Nanosystems Industry", the project "Development of Technological Solutions for Formation of Nanostructured Hybrid Membranes and Creation on their Basis Potentiometric Multisensor Systems for Water Processing Media Reagentless Express Monitoring"	000 Voronezhselmash	DSc in Chemistry, Professor O. V. Bobreshova	05.06.2014– 31.12.2016							
5	Activity 1.3 "Natural Resources Management", the project "New Technology and Equipment for Synthesizing Nanoscale Magnesian Powders from Recycled Waste of Enriched Amorphous Magnesite Production"	000 Flux and Magnesian Materials Plant	DSc in Chemistry, Professor V. F. Selemenev	22.09.2014– 31.12.2016							
6	Activity 1.3 "Natural Resources Management", the project "Development of Energy-saving Technologies Used in the Process of Production of Emulsifiers and Emulsifying Systems for Food and Non-food Industry Based on Raw Materials and Their Derivative Products"	OAO Efirnoye	DSc in Chemistry, Professor Kh. S. Shikhaliev	27.10.2015– 31.12.2017							
	The federal target programme "Development of the of the Russian Federation for the Period	e Pharmaceutical c up to the Year 2020	nd the Medical Industrie and beyond"	es							
9	Activity 5.22 "Development of New Academic Programmes and Educational Modules for Profession- Oriented Institutions of Higher Education and Secondary Educational Institutions", the project "Development of an Educational Module Set for Master's Programmes in Biology – the Profile "Screening Non-Clinical Study of Medicinal Products"	-	DSc in Biology, Professor T. N. Popova	02.10.2015– 05.12.2016							
	The Programme of the Fund for Infrastructure and Educational Programmes (ROSNANO)										
10	The project "Working out a Continuing Professional Development Programme of Further Education in the Field of Modern Methods of Analysis of Surface Characteristics in the Manufacture of Nanostructured Coatings"	OAO Turbonasos	DSc in Physics and Mathematics, Professor V. A. Kostin	13.10.2015– 01.11.2016							



### 5.9. VSU PATENT ACTIVITY IN 2012-2016

In 2016, patent and license activity enhancement was continued. In total, VSU academic staff created 98 copyrightable intellectual property items. 81 patent and registration certificates applications were filed. The results of intellectual property activities were used to create two new SIBs. Figure 5.5 shows IP applications dynamics.

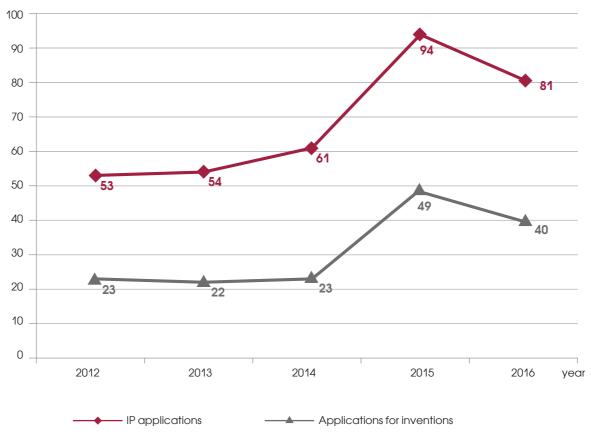
As a result of the increase in registered software products, the number of computer programs and database certificates received in 2016 reached its maximum – 32. The number of patents received went up to 36 (Fig. 5.6). Patent activities played a great role in the implementation of the University Strategic Development Programme.

In 2016, the number of supported patents decreased to 74, which can be accounted for by the fact that the university tends to support commercially justifiable patents.

In 2016, about 511 thousand roubles was spent on state dues.

#### Figure 5.5

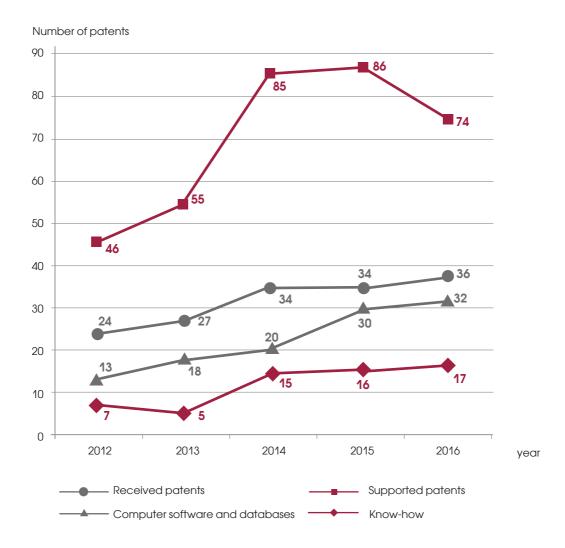
### APPLICATIONS FOR IPS AND INVENTIONS (2012–2016)



Number of applications



Figure 5.6 VSU PATENT ACTIVITY (2012–2016)





### **5.10. IP APPLICATIONS DYNAMICS PER FACULTY**

The monitoring of patent activity per faculty has been carried out over the last seven years. The Faculty of Applied Mathematics, Informatics, and Mechanics was leading in the number of applications submitted; the Faculty of Chemistry showed the second best result; and the Faculty of Physics and the Faculty of Biomedical Sciences stand together in joint third place (Table 5.3, Fig. 5.7).

#### Table 5.3

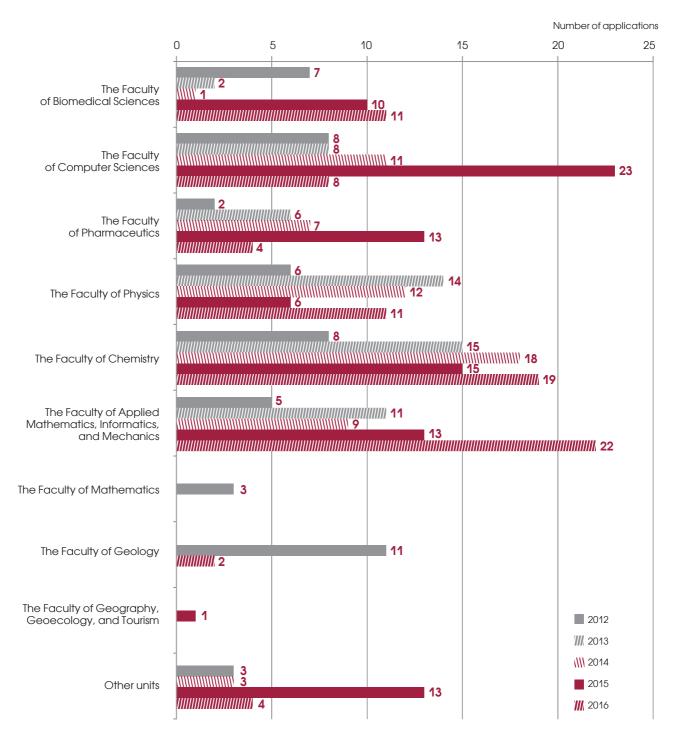
### IP APPLICATIONS DYNAMICS

Faculty	2012	2013	2014	2015	2016
The Faculty of Biomedical Sciences	7	2	1	10	11
The Faculty of Computer Sciences	8	8	11	23	8
The Faculty of Pharmaceutics	2	6	7	13	4
The Faculty of Physics	6	14	12	6	11
The Faculty of Chemistry	8	15	18	15	19
The Faculty of Applied Mathematics, Informatics, and Mechanics	5	11	9	13	22
The Faculty of Mathematics	3	-	-	-	_
The Faculty of Geology	11	-	-	-	2
The Faculty of Geography, Geoecology, and Tourism	_	_	_	1	_
Other units	3	-	3	13	4
Total	53	56	61	94	81



#### Figure 5.7

### IP APPLICATIONS DYNAMICS PER FACULTY (2012–2016)



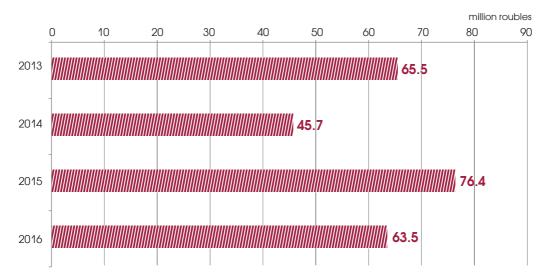


### 5.11. INNOVATIVE VENTURES DEVELOPMENT: SIB ACTIVITIES, COLLABORATIO WITH TECHNOLOGY PLATFORM ORGANIZATIONS

In 2016, the university saw a slight decrease in SIB entrepreneurial activity. Cash assets turnover from SIBs amounted to 63.5 million roubles, which is 17% lower than compared to the previous reporting period. The dynamics of cash assets turnover from SIBs in 2013–2016 is shown in Fig. 5.8.

#### Figure 5.8

### CASH ASSETS TURNOVER FROM SIBS



The university continued detecting and closing down SIBs that have remained ineffective for several years. In 2016, two slow-moving SIBs were closed. The closing of 11 more SIBs is being considered.

Along with the closing of slow-moving SIBs, two new SIBs were created. Therefore, 32 SIBs were registered by the end of 2016. Table 5.4 presents the list of the most effective SIBs in 2016.

#### Table 5.4

### SIBS THAT SHOWED THE BEST RESULTS IN 2016

SIB's name	Cash assets turnover in 2015 million roubles	Cash assets turnover in 2016 million roubles
000 Tsitrin	29.0	29.5
OOO VPPEM	5.4	7.2
000 AKMA-Universal	9.3	6.5
000 TeknoKhim	12.8	4.4
000 Bumblebee-Keeping Technologies	0.5	3.9
000 RPE Hydrogeocentre	3.6	3.3
000 PlazmoSil	2.0	2.9
000 NanoImpulse	3.4	1.8



The university's contribution to the capital stock of the newly created SIBs was, as usual, the rights of utilization of the results of intellectual activity classified as trade secrets. These rights were transferred under license agreements concluded with the SIBs. In 2016, five license agreements were concluded.

Intellectual property rights were also transferred under license agreements and agreements on the cession of rights concluded with the university's industrial partners implementing projects within the framework of FTP "Research and Development in Top-Priority Areas of Science and Technology in Russia for 2014–2020", as well as under the Order of the Russian Government No.218 dated 9 April, 2010 "State support of development of cooperation between Russian educational institutions of higher education, state research institutions and organisations that implement integrated hi-tech production projects". In 2016, two agreements on the cession of rights were concluded with OAO EFKO (upon completion of a joint project carried out under the Order of the Russian Government No.218) and three licence agreements were concluded with OOO Voronezhselmash. Following these agreements the company is entitled to utilise the intellectual property of the university obtained as a result of joint projects carried out within the framework of the FTP.

See indices describing the university's intellectual property transfers and acquisition activities in Table 5.5.

#### Table 5.5

							<u>                                     </u>
Indices	2010	2011	2012	2013	2014	2015	2016
1. Number of SIBs created	7	7	7	5	4	4	2
2. Number of license agreements (agreements on the cession of rights) concluded	7	7	7	5	4	5	10
3. Number of SIB-referenced license agreements concluded	7	7	6	4	2	3	5
4. Number of concluded license agreements (agreements on the cession of rights) with no reference to a SIB	-	-	1	1	2 (including 1 agreement on the cession of rights)	2 agreements on the cession of rights	5 (including 2 agreements on the cession of rights)
5. Number of existing license agreements (agreements on the cession of rights) – increment total	7	14	21	26	29	31	39
6. Economic benefits (revenue, cost-cutting) of acquisition/selling license agreements (agreements on the cession of rights), roubles			50 000	33 322	28 322	6,800 (by reducing costs due to non-reciprocal acquisition)	270 000

# VSU INTELLECTUAL PROPERTY TRANSFER (ACQUISITION) ACTIVITY DYNAMICS



Table 5.6 demonstrates the results achieved in intellectual property commercialisation using various mechanisms.

### Table 5.6

### TECHNOLOGY COMMERCIALISATION MECHANISMS

						///////////////////////////////////////
Period	2011	2012	2013	2014	2015	2016
SIBs	14	21	26	30	31	32
License agreements	7	7	5	3	3	8
Agreements on the alienation of rights	-	-	-	1	2	2

### **COOPERATION WITH TECHNOLOGICAL PLATFORMS**

In 2016, VSU continued to cooperate with 9 technological platforms. **Technological platform "Ecological Development Technologies"** supported the project "Studying and developing technological solutions for energy-efficient utilisation of high-mineralized waste from ion-exchange water treatment units on electric power plants by means of the next generation electromembrane units". The project was submitted for a contest within the FTP "Research and Development in Top-Priority Areas of Science and Technology in Russia for 2014–2020".

In cooperation with the **technological platform "Technologies for the Food Processing Industry of AIC – Healthy Food"** the university presented:

- Description of three technologies developed by the VSU researchers to be included in the list of Projects Portfolio 2016 that will be available on the platform's website.
- Information about the equipment and methods used by Complex Research Laboratory and the Centre for Collective Use of Scientific Equipment in order to build up an integrated information system for assessing the quality of agricultural and food products.
- Expert evaluation of four standards:
  - "Polymer materials recycling specialist".
  - "Polymer materials synthesis specialist".
  - "Composite materials recycling specialist".
  - "Composite materials synthesis specialist".

### PERSONNEL TRAINING FOR THE INNOVATION SECTOR

In 2016, VSU continued its activities aimed at implementing an additional further training academic programme "Intellectual Property Management" launched in 2015. Nine people successfully completed their studies within the programme. Income from educational services per one academic staff member amounted to 40,500 roubles.



### 5.12. OVERVIEW OF INTERMEDIARY COMPLETED INNOVATION PROJECTS RESULTS

In 2016, within the framework of the Order of the Government of the Russian Federation No. 218, VSU implemented the project "Hi-tech production of efficient multifunctional membrane units for high purity hydrogen evolution from hydrogen-containing gas mixtures". The project includes the whole production process of membrane units for hydrogen ultrapurification – starting with the research stage and up to the production setup and construction of a test sample using the production facilities of the customer – OOO FPK *Kosmos-Neft-Gaz*. The project was implemented jointly with A.A. Baikov Institute of Metallurgy and Material Science of the Russian Academy of Sciences. Head researcher – Full Member of the Russian Academy of Sciences, V. M. levlev

In 2016, the results of the project included:

- The requirements to the material of the membrane unit (its elemental composition, structure, phase composition, surface morphology, and mechanical properties) were set.
- Two methods for production of Pd-Cu alloy foil were developed: using magnetron sputtering\* and cold-rolling mill (10 microns).
- Technical justification of membrane technology for hydrogen ultrapurification was given.
- Laboratory samples of membrane units were produced\*.
- A laboratory membrane unit for hydrogen ultrapurification was manufactured and tested\*.
- The application scope and requirements to the design and production technology of the membrane unit (properties, structure, reliability, and operational life) were set, and the operation modes were determined.
- Optimal modes for hydrogen purification were determined.
- Technical solutions for membrane unit manufacture were suggested, and production technology was described.
- Freedom to operate was obtained.

A model of the membrane unit is currently under development, and the engineering documentation is being prepared.

<sup>\*</sup> All the studies were performed at the VSU Science Park.



### **5.13. OVERVIEW OF INNOVATION BUSINESS INCUBATOR**

VSU's innovation business incubator is not only a university facility but also a unique platform that joins VSU's SIB administration, representatives of research and expert communities of other universities, as well as specialized departments of Voronezh and the Voronezh regional administration.

In 2016, the following areas were developed:

- 1. Concluding contracts with contracting organizations to enable efficient business of the VSU Business Incubator: contracts with 4 service providers (OOO *Stroipozhservis* (fire protection service), OAO *SKBKM* (water supply and sewerage), OOO *Centre for preventive disinfection* (disinfection and deraturation services), ZAO *Quant-telecom* (telephony)).
- 2. Promotion of key R&D projects by VSU researchers and small innovation businesses at exhibitions and presentation platforms: Archimedes-2016 (Moscow), Moscow International Education Salon - 2016 (Moscow), Expo-Russia Kazakhstan 2016 (Almaty, Kazakhstan), X Interregional Exhibition of Agricultural Equipment and Technologies "Voronezh field" (Voronezh region, Liski area), XII International Salon of Inventions and New Technologies "Novoje Vremya" (Sevastopol), VSU exhibition at "The Voronezh Region Days" at the Council of the Russian Federation (Moscow), VuzPromExpo-2016 (Moscow), etc. Over 35 key R&D projects by VSU researchers and SIBs were presented at 10 exhibitions and presentation events. VSU researchers were also awarded various prizes for their projects, including the Region Cup "For contribution to development of inventions and efficiency promotion in the region", and two golden medals awarded to V. Selemenov, V. Semenov, V. Kuznetsov and A. Zenistcheva for their project "Water-retaining supersorbent Solid Water". Each project involved the preparation of exhibition materials, computer presentations, development of the project design, and the preparation of stands and banners.
- 3. Participation of employees in the following workshops:
  - Training session "Scientific communication psychology and techniques of public speech" (a certificate of participation was received).
  - Training workshop "Social entrepreneurship new business opportunities".
  - Workshop "Trade negotiations tips from experts".



- 4. Full-scale support of the VSU Innovation Projects Contest 2016 (hereinafter Contest). The Contest was held at the innovation business-incubator by the Rector's directive of 19th September 2014, No.590. Applications for the Contest were submitted between September 2015 and 1 June 2016. 54 applications by VSU students and young researchers were submitted for the Contest. The 11 best projects were presented in the final in June 2016. The prizes were awarded as following:
  - Ist prize 120 thousand roubles was awarded to Andrey Chuvychkin for the project "Development of the Express Water Testing Kit "Rosa" for Everyday Usage".
  - 2nd prize 80 thousand roubles was awarded to A. Kolupaev for the project "A Mobile Communication Device for Blind, Deaf, and Mute People".
  - 3rd prize 60 thousand roubles was awarded to Yu. Polkovnikova for the project "Development of the Innovative Encapsulated Dosage Forms of Afobazol".

The following people were granted with winner certificates and special awards of 20 thousand roubles each:

- A. Kokhanovskaya for the project "Scientific Theatre".
- E. Moiseeva for the project "Development of the Technology of the Common Oak (Quercus robur L.) Quickened Growth for the Reafforestation of the Central Black Earth Region".
- P. Kulintsov for the project "Laboratory Production Line of Ion-Exchange Membranes".

The following people were granted finalist certificates and special awards of 15 thousand roubles each:

- G. Komarov for the project "Mould Powder Production Technologies Based on Mineralogical Studies".
- K. Fisenko for the project "Information System with the Tactile and Temperature Feedback in Myoelectric Prostheses".
- A. Lun for the project "Colloidal Particle Size Analyser Based on the Method of Dielectric Spectroscopy".
- A. Mamaev for the project "Rehabilitation Device for Blind and Partially Sighted People "Sukhbot"".



Moreover, K. Fisenko also received a special award granted by the Informsvyaz group of companies.

VSU continues work with the Contest finalists to prepare intellectual property applications, create SIBs, conclude license agreements with companies interested in commercialising the results of intellectual activities.

4.1. Within the framework of the Contest, VSU also held a forum "Social innovations".

In the two weeks of the forum over 50 participants completed the programme "Project management", and received consultative support in submitting the suggested social projects.

During the final session, 16 participants defended their projects. The best projects were chosen for the final of the "Start-up Factory" competition.

5. Consultative and administrative support of innovation projects by VSU students and staff submitted for the contest held between Voronezh universities "Innovation cup - 2016".

In 2016, VSU played an active part in the annual innovation project contest held between Voronezh universities "Innovation Cup" – VSU's young researchers submitted 5 innovation projects for this contest. During the process of preparation, each project received individual consultative support. Voronezh State University was announced to be the best innovative university of the Voronezh region in 2016. The university was awarded with a trophy. The winners of the Innovation Cup include:

- D.A. Minakov for the project "A device for early express diagnostics of mouth cavity pathologies"
- A.O. Donskikh for the project "Onstream rapid-response analyser of grain mixtures elements using spectrum analysis instruments".
- M.M. Glazykin for the project "Universal CAR DIS automobile diagnostics and repairs suit".

All the winners were awarded with grants with total amount of 620 thousand roubles.

6. Monitoring and support of VSU SIBs activities. In 2016, the Innovative Business Incubator held a series of meetings in order to discuss the ways to enhance the interaction between the university and the SIBs. A comprehensive analysis of the SIBs performance was carried out, and a number of legal and formal issues were settled. Three SIB's projects received full-scale support and were submitted for the competition for the grants of Skolkovo foundation and the Fund for Promotion of Innovations. Two consents were granted by the Ministry of Education and Science of the Russian Federation for the lease of the Business Incubator's premises, and three more lease applications were submitted.



- 7. Development of the integrated system of cooperation between small business state support agencies, SIB, and VSU staff and students.
- 8. There was an increase in the activity of VSU's and SIB's researchers aimed at intellectual property rights protection: applications submitted to the Federal Institute of Industrial Property received full-scale support in order to make the process quicker.
- 9. Atlas of Innovations of VSU The goal of the VSU Innovative Projects Atlas is to enhance introduction of the university R&D projects into production as a result of increased marketing efficiency aimed at fulfilling VSU's innovative potential.

In order to achieve this aim, the following objectives were performed:

- Full-scale monitoring of the university innovation potential was carried out.
- Most promising and in demand R&D projects were detected.
- Procedures for preparation of electronic or printed presentations for the university's most promising innovation R&D projects were developed.

VSU Atlas of Innovations is available in three forms:

- An electronic version published on the university official website and innovation portal.
- An illustrated printed brochure.

A set of adcards containing information about the Atlas is to be designed and printed in 2017.

VSU Atlas of Innovations will be continuously updated with new innovative projects.

10. Bilateral cooperation with the following organisations providing support for the Voronezh region small business and innovation structure development was developed: State Foundation for Assistance to the Voronezh Region Small Innovative Enterprises, OKU Innovations and Development Agency, GBU Voronezh Region Cluster Development Centre, the Economic Department, the Entrepreneurship and Trade Development, and the Department of Industry of the Voronezh region, VPRSP OPORA, GS Leader. A project was implemented under the contract with OKU AIR for the amount of 10 thousand roubles.

In 2016, Innovation Business Incubator included the Centre For Youth Initiatives.



### 5.14. VSU R&D PROJECT DATABASE

VSU R&D project database was launched in 2013. Databases are beneficial for technological platforms, for exhibitions, and for cooperation with industrial enterprises, organisations, and regional and municipal bodies.

In 2016, VSU prepared and submitted a number of applications to the competitions held by the Ministry of Education and Science of the Russian Federation, using the information about projects with high commercial potential.

- 1. Federal target programme "Research and Development in Top-Priority Areas of Science and Technology in Russia for 2014–2020" (activity 1.3, phase 2):
  - The project "Development of production technologies of biodegradable water-retaining polymer materials with supersorbent properties to increase soil fertility".

Head researcher – V. A. Kusnetsov, DSc in Chemistry. Industrial partners – OOO *Krasnodarsky Biocentre* and OOO *UK VMS*.

The project "Research and development of technological solutions for energy-efficient utilisation of high-mineralized sewage from ion-exchange water treatment units of power plants, using next generation electric membrane units".

Head researcher – P. I. Kulintsov, DSc in Chemistry. Industrial partner – AO *Gidrogas*.

- The project "Development of a production technology of critical parts of steel casting machines from nanostructured periclase-spinel ceramics".
   Head researcher – V. V.Sirota, DSc. in Physics and Mathematics.
   Industrial partner – AO Litosphera.
- 2. Contest of research projects implemented by research centres and university research laboratories:
  - The project "Development of new corrosion inhibitors for copper and its functionally-substituted triazole alloys to be used in heat-exchange equipment".

Head Researcher – Kh. S. Shikhaliev, DSc in Chemistry

Industrial partner - industrial group Sodeystvije.



The project "Research and development of modified ion-exchange membranes and import-substituting electrodeionisation machines employing these membranes".

Head researcher – V. A. Shaposhnik, DSc in Chemistry. Industrial partner – AO *Gidrogas*.

The project "Development of methods for express analysis and sorting of elements of grain mixture with pathologies, based on the combination of spectrum analysis and machine learning methods".

Head researcher – A. A. Sirota, DSc in Technical Sciences. Industrial partner – OOO *Voronezhselmash*.

- 3. Order of the Russian Government No. 218.
  - The project "Development and production of industrial coating compositions using new corrosion inhibitors".
     Joint contractor A. N. Frumkin Institute of Physical chemistry and Electrochemistry of the Russian Academy of Sciences.
     Industrial partner ZAO Academic Manufacturing Holding VMP.
     Head Researcher Kh. S. Shikhaliev, DSc in Chemistry.
- 4. Contest for state support of projects for creation and development of engineering centres at higher educational institutions.
  - The project "Strategic development programme of the engineering centre IT-agro for 2017–2021".

Industrial partner-OOO Voronezhselmash. The project included creation and development of an engineering centre jointly with OOO Voronezhselmash. The key activity areas of the centre include engineering services, industrial design services, experimental design, and technological work.



### **5.15. PERFORMANCE OF VSU DISSERTATION BOARDS**

In 2016, 16 dissertation boards in 34 fields of study were operating at VSU. There were also two joint dissertation boards operating in five fields of study. In November 2016, a new joint dissertation board operating in two fields of study was approved by the Order of the Ministry of Education and Science of the Russian Federation (table 5.7).

In 2016, 112 dissertations were defended in Voronezh State University dissertation boards, including:

- 26 dissertations defended by postgraduate students that graduated in 2015–16,
- 7 PhD dissertations defended by VSU staff members, and 4 doctoral dissertations defended by VSU staff members (Table 5.8).

8 postgraduate students and 1 VSU staff member defended their dissertations at dissertation boards belonging to other universities.

All the dissertation boards operate within the integrated information system of the state certification of research, academic and teaching staff. Members of the dissertation boards are required to publish their articles regularly in journals with high impact factor included in the Russian Science Citation Index database. Of great importance are also their Hirsch indices (according to Web of Science and the Russian Science Citation Index database), and their citation indices in the Russian Science Citation Index database over the last 5 years.

On the University website (page "State certification of research"), there are

• the dissertation boards lists and the lists of their members, as well as

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full dissertation texts, dissertation abstracts, the applicants' personal information, the information on the the external reviewer, as well as the reviews on dissertations and dissertation abstracts.

The boards perform a self-initiated check of dissertations for the use of borrowed material without including a reference to the author or the source using the Antiplagiat system.

Table 5.7

### DISSERTATION BOARDS AS OF 1 JANUARY 2017

Code of the dissertation board, fields of study	Chairperson, Academic Secretary contact details
D 212.038.01 09.00.01 – Ontology and Epistemology 09.00.11 – Social Philosophy	Alexandr S. Kravets – Chairperson Irina Yu. Tikhonova – Academic Secretary Phone: +7 (473) 255-08-57 E-mail: dekanat@phypsy.vsu.ru
<b>D 212.038.03</b> 03.01.02 – Biophysics 03.01.2004 – Biochemistry	Valeriy G. Artyukhov – Chairperson Margarita Yu. Grabovich – Academic Secretary Phone: +7 (473) 220-89-81 E-mail: artyukhov@bio.vsu.ru
D 212.038.06 01.04.02 – Theoretical Physics 01.04.05 – Optics 01.04.07 – Condensed Matter Physics	Boris Zon – Chairperson Sergey N. Drozhdin – Academic Secretary Phone: +7 (473) 220-87-48 E-mail: zon@niif.vsu.ru
<b>D 212.038.07</b> 10.02.01 – Russian Language 10.02.19 – Linguistic Theory	Alexey Kretov – Chairperson Tatiana N. Golitsyna – Academic Secretary Phone: +7 (473) 276-92-61 E-mail: a_a_kretov@rambler.ru
D 212.038.08 02.00.01 – Inorganic Chemistry 02.00.04 – Physical Chemistry 02.00.05 – Electrochemistry	Alexander V. Vvedensky – Chairperson Boris V. Sladkopevtsev – Academic Secretary Phone: +7 (473) 220-85-46 E-mail: dp-kmins@yandex.ru
<b>D 212.038.12</b> 07.00.02 – Russian History 07.00.06 – Archaeology	Mikhail Karpachev – Chairperson Elena Yu. Zakharova – Academic Secretary Phone: +7 (473) 224-75-15 E-mail: m-karpach@mail.ru; ez@hist.vsu.ru
D 212.038.14 10.01.01 – Russian literature 10.01.03 – International Literature (literature of the countries of Germanic and Romance language families)	Viktor Akatkin – Chairperson Alexander Zhitenev – Academic Secretary Phone: +7 (473) 255-99-49, 220-89-41 E-mail: msv2012kafedra@yandex.ru, pravdukhina@phil.vsu.ru
D 212.038.15 08.00.01 – Economics Theory 08.00.05 – Economics and National Economy Management (by field and sphere of activity, including Labour Economics, Regional Economics)	<b>Tatiana N. Gogoleva</b> – Chairperson <b>Galina V. Golikova</b> – Academic Secretary Phone: +7 (473) 228-11-60, доп. 5130 E-mail: tgogoleva2003@mail.ru
<b>D 212.038.16</b> 10.02.04 – Germanic Languages 10.02.05 – Romance Languages	Natalia A. Fenenko – Chairperson Ksenia M. Shilikhina – Academic Secretary Phone: +7 (473) 220-41-49 E-mail: shilikhina@rgph.vsu.ru
<b>D 212.038.18</b> 10.01.10 – Journalism	Vladimir V. Tulupov – Chairperson Alexander A. Kazhikin – Academic Secretary Phone: +7 (473) 274-52-71 E -mail: vlvtul@mail.ru

End of table 5.7

Code of the dissertation board, fields of study	End of Table 5.7 Chairperson, Academic Secretary contact details
D 212.038.19 02.00.02 – Analytical Chemistry 02.00.03 – Organic Chemistry 02.00.21 – Solid State Chemistry	Viktor N. Semenov – Chairperson Nadezhda V. Stolpovskaya – Academic Secretary Phone: +7 (473) 220-89-73 E-mail: kcmf@main.vsu.ru
D 212.038.20 05.13.17 – Theory of Informatics 05.13.18 – Mathematical Modelling, Numerical Methods and Program Systems	Alexander D. Baev – Chairperson Sergey Shabrov – Academic Secretary Phone: +7 (473) 220-86-18 E-mail: pokorny@kma.vsu.ru
D 212.038.22 01.01.01 – Substantial, complex and functional analysis 01.01.02 – Differential Equations, Dynamical systems and Optimal Control	<b>Evgeniy Semyonov</b> – Chairperson <b>Yuriy Gliklikh</b> – Academic Secretary Phone: +7 (473) 267-49-03 E-mail: yeg@math.vsu.ru
<b>D 212.038.23</b> 08.00.12 – Accounting, Statistics	Dmitry Endovitskiy – Chairperson Tatiana Pozhidayeva – Academic Secretary Phone: +7 (473) 275-57-27 E-mail: endov@econ.vsu.ru
<ul> <li>D 999.010.03</li> <li>13.00.01 – General Pedagogics, History of Pedagogics and Education</li> <li>13.00.08 – Theory and methods of</li> <li>vocational education</li> <li>FSFEI HE "Voronezh State University"</li> <li>FSFEI HE "Lipetsk State Pedagogical</li> <li>University"</li> <li>FSF MEI HE "Air Force Military Academic</li> <li>Centre"</li> <li>"N.E. Zhukovsky and Yu.A. Gagarin Air</li> <li>Force Academy" (Voronezh)</li> </ul>	Natalia I. Viyunova – Chairperson Irina F. Berezhnaya – Academic Secretary Phone: +7 (473) 255-72-01 E-mail: beregn55@mail.ru
D 999.104.03 2.00.01 – Theory and History of State and Law, History of State and Law Studies 12.00.02 – Constitutional Law, Constitutional Proceedings, Municipal Law 12.00.14 – Administrative Law; Administrative Procedure FSA EI HE "Belgorod State National Research University" FSFEI HE "Voronezh State University" FSFEI HE "Oryol State University"	Gennady A. Borisov – Chairperson Yury N. Starilov – Vice Chairperson Alexey N. Niphanov – Academic Secretary Phone: +7 (473) 255-07-19
D 999.109.03 05.13.01 – System Analysis, Management and Information Processing (Radioelectronics, Automatics, Communications) 05.13.06 – Automation and control of the technological processes and production (industry) FSFEI HE "Voronezh State Technical University" FSFEI HE "Voronezh State University" FSFEI HE "Lipetsk State Technical University"	Semen L. Podvalny – Chairperson Tatiana M. Ledeneva – Vice Chairperson Viktor L. Burkovsky – Academic Secretary Phone: +7 (473) 220-83-16



### Table 5.8

### PHD DISSERTATIONS DEFENDED AT VSU DISSERTATION BOARDS IN 2016

	ع -		The number of dissertations considered in 2016							
			PI	רD			DSc			
Code of the dissertation board	Code of the fields of study that the board is approved to operate in		VSU staff members	VSU postgraduate students (graduated in 2015-16)	External applicants	Total	VSU staff members	External applicants		
D 212.038.01	09.00.01 – Ontology and Epistemology	-	-	-	-	-	-	-		
	09.00.11 – Social Philosophy	1	-	_	1	_	-			
D 212.038.03	03.01.02 – Biophysics	5	-	1	4	-	-	-		
	03.01.04 – Biochemistry		1	2	2	-	-	-		
D 212.038.06	01.04.02 – Theoretical Physics		-	1	-	-	-	-		
	01.04.05 – Optics		-	-	1	-	-	-		
	01.04.07 – Condensed Matter Physics		-	1	1	-	-	-		
D 212.038.07	10.02.01 – Russian Language		1	3	4	-	-	-		
	10.02.19 – Linguistic Theory		1	1	3	-	-	-		
D 212.038.08	02.00.01 – Inorganic Chemistry		-	1	-	-	-	-		
	02.00.04 – Physical Chemistry		-	1	-	3	2	1		
	02.00.05 – Electrochemistry	3	_	1	2	-	-	-		
D 212.038.10	01.04.03 – Radiophysics	3	-	2	1	-	-	-		
	01.04.10 – Semiconductor Physics	2	-	-	2	-	-	-		
	05.13.01 – System Analysis of Management and Information Processing	2	-	1	1	-	-	-		
D 212.038.12	07.00.02 – Russian History	2	-	1	1	3	-	3		
	07.00.06 – Archaeology	3	-	-	3	1	1	-		
D 212.038.14	10.01.01 – Russian literature		-	1	2	-	-	-		
	10.01.03 – International Literature (literature of the countries of Germanic and Romance language families)	3	-	1	2	-	-	-		
D 212.038.15	08.00.01 – Economics Theory	-	-	-	-	-	-	-		
	08.00.05 – Economics and National Economy Management (by field and sphere of activity, including Labour Economics, Regional Economics)	7	-	2	5	2	-	2		



### End of table 5.8

	The number of dissertations considered

		The number of dissertations considered in 2016							
pard			Pl	hD			DSc	1	
Code of the dissertation board	Code of the fields of study that the board is approved to operate in	Total	VSU staff members	VSU postgraduate students (graduated in 2015-16)	External applicants	Total	VSU staff members	External applicants	
D 212.038.16	10.02.04 – Germanic Languages	3	2	-	1	-	-	-	
	10.04.05 – Romance Languages	1	-	-	1	-	-	-	
D 212.038.18	10.01.10 – Journalism	5	-	-	5	1	-	1	
D 212.038.19	02.00.02 – Analytical Chemistry	5	1	-	4	1	1	-	
	02.00.03 – Organic Chemistry	1	-	1	-	-	-	-	
	02.00.21 – Solid State Chemistry	-	-	-	-	-	-	-	
D 212.038.20	2.038.20 05.13.17 – Theory of Informatics		-	-	1	-	-	-	
	05.13.18 – Mathematical Modelling, Numerical Methods and Program Systems		-	-	-	-	-	-	
D 212.038.22	01.01.01 – Substantial, complex and functional analysis	5	1	2	2	-	-	-	
	01.01.02 – Differential Equations, Dynamical systems and Optimal Control	8	-	2	6	1	-	1	
D 212.038.23	08.00.12 – Accounting, Statistics	5	-	1	4	-	-	-	
D 212.038.24 (closed	01.02.04 – Solid Mechanics (Physics and Mathematics)	1	-	-	1	-	-	-	
14.01.2016)	05.12.17 – Theory of Informatics (engineering sciences)	-	-	-	-	-	-	-	
D 999.010.03	13.00.01 – General Pedagogics, History of Pedagogics and Education	4	-	-	4	-	-	-	
	13.00.08 – Theory and methods of vocational education	4	-	-	4	_	-	-	
D 999.104.03	12.00.01 – Theory and History of State and Law, History of State and Law Studies	-	-	-	-	-	-	-	
	12.00.02 – Constitutional Law, Constitutional Proceedings, Municipal Law	-	-	-	-	-	-	-	
	12.00.14 – Administrative Law; Administrative Procedure	-	-	-	-	-	-	-	
D 999.109.03	05.13.01 – System Analysis, Management, and Information Processing (Radioelectronics, Automatics, Communications)	-	-	-	-	-	-	-	
	05.13.06 – Automation and control of the technological processes and production (industry)	-	-	-	-	-	-	-	
Total 112		101	7	26	68	12	4	8	



### 5.16. VSU ENDOWMENT FUND

The VSU Endowment Fund was founded in March 2013 to attract additional resources to provide long-term financing of the university's research, social and infrastructural programmes and projects.

### The founders of the fund

- Rector Dmitry A. Endovitsky on behalf of Voronezh State University;
- Elena O. Ivashinenko on behalf of VSU Alumni Association;
- Alexander A. Sokolov;
- Gennady V. Chernushkin.

### The Fund's Board of Trustees

- Evgeniy V. Yurchenko, Chairman of A.S. Popov Investment Fund.
- Alexandra V. Glukhova, Head of the Department of Sociology and Politology.
- Dmitriy R. Lapygin, Director of Economic Affairs of OOO *RET*.
- Sergey V. Sokolinsky Head of the Voronezh regional division of the Association of young businessmen.

The supreme corporate body of the Managing Fund is the Management Board that decide on the main issues concerning the Fund's activities, including expenditure targets of the previous year's revenue.

### The Fund Management Board

- Dmitry A. Endovitskiy Chairperson
- Alexander A. Sokolov
- Gennady V. Chernushkin
- Evelina P. Domashevskaya

#### Director of the VSU Endowment Fund

Elena O. Ivashinenko – Head of the Strategic Development Department.

The endowment's assets are held under trust by ZAO Gazprombank – Assets Management.

The Fund Management Board decided to spend the revenue on the following measures:

- Providing grants to young scholars, covering the research and internship costs.
- Providing grants to VSU's leading scientists.
- Personalized retirement benefits to VSU's outstanding lecturers and scholars (the benefactor may choose a specific person to receive the benefit).
- A special-purpose contribution to sponsor the education of talented students.
- Personalized scholarships for undergraduate and postgraduate students.
- Purchasing unique equipment for increasing the innovative capacity of the research.
- Remote pre-entry training for school leavers.
- Organizing academic competitions for VSU applicants.



- Supporting the innovative educational Youth Centre for Scientific Creativity.
- Development of the VSU Botanical Garden, the VSU's biocentre and recreation facility "Venevitinovo", and reserve "Galichya Gora", as well as other uses in compliance with the VSU development strategy.

As of 31 December 2016, the endowment's assets reached 15,283,685 roubles.

New donations made in 2016 amounted to 1,618,800 roubles.

The market value of the assets constituting the endowment was 18,647,494 roubles. The revenue from the discretionary management of the VSU Endowment Fund in 2016 was 10.5%, i.e. 1,565,000 roubles in absolute terms (excluding the remuneration of the management company) (Table 5.9).

#### Table 5.9

### VSU ENDOWMENT FUND VALUE AND CONTRIBUTIONS

Year Indices	2013	2014	2015	2016
The endowment's assets by the end of the year, thousand roubles	12,692.8	13,069.6	14,687.0	15,283.7
Augmentation of the endowment, thousand roubles	12,692.8	376.8	1617.4	596.7
Net asset value by the end of the year, thousand roubles	13,025.0	13,378.0	17,248.0	18,647.5
The revenue from the discretionary management, thousand roubles	437.3	400.1	2735.0	1565.0
Annual effective yield, %	8.4	3.5	22.0	10.5
Inflation, % (according to the Russian Federal State Statistics Service)	6.45	11.4	13.0	5.4
Amount of contribution, thousand roubles	393.7	360.1	707.8	-

In 2016, the Fund Management Board decided to spend some of the 2015 revenues on financial aid to long-service employees with the length of service to the university over 50 years.

The Board of Trustees and the Management Board will decide how to spend the income for 2016.

Two VSU members completed a study course "Endowment fund foundation and development strategy" at SKOLKOVO Moscow management school within the framework of the Charitable Programme for endowment funds development support in Russia "Endowment funds: growth strategy". Last year VSU implemented a part of the programme – the project "VSU 100th anniversary as a symbolic cultural capital resource". 200,000 roubles were received from the Potanin Foundation for the implementation of the project.

Current data about the Fund's activity can be found on the Fund's website **www.vsu.ru**/**endowment-fund**/.



### 5.17. VSU ALUMNI ASSOCIATION

VSU Alumni Association was founded in December 2012 in order to maintain contacts with the university graduates, help graduates to stay in touch with each other, and involve them in joint projects. The number of registered users of the Association's website currently stands at over 900 people, including 80 members of the Association.

In March 2016, professor T. A. Diakova, head of the VSU Cultural Centre and a member of the Council of VSU Alumni Association, was appointed the Chair of the Council of the non-profit partnership VSU Alumni Association.

Each faculty, in turn, appoints a member responsible for employment monitoring and for contacts with students.

The main activities of VSU Alumni Association in 2016.

- In June 2016, VSU Alumni Association won the first 2016 open competition for grants to non-profit non-governmental organization held by the all-Russian public organization "Russian Rectors' Union" under the Decree of the Russian President No. 68-rp dated 5 April, 2016. Over 500 applications were submitted for the competition, and 50 of them won. The grant amounts to 1,951,000 roubles and is to be spent on the project suggested by a VSU graduate, Dmitry Kouda, "Tournament of Three Sciences 2017". Regional qualifying stages of the Tournament are to be held in spring 2017 in 4–6 federal districts of the Russian Federation. The final stage will take place in autumn 2017 at VSU. In 2016, the Tournament was held within the framework of the sub-programme "Enhancing State Support of Socially-Oriented Non-Commercial Organisations" of the state programme of the Voronezh region "Public Social Support". That year a 300,000 rouble subsidy was received by VSU from the Government of the Voronezh region.
- In August 2016, a Hungarian Alumni's Forum was held at VSU, with delegation of VSU graduates of 1990–1993 from the Faculty of Philology. Apart from initiating the forum, the graduates form Hungary also founded the Hungarian Alumni Association in order to maintain contacts with each other and the university. The forum programme had both formal events and varied entertainment programme, such as meetings with lecturers and fellow students from the Faculty of Philology. In gratitude for everything they learned at our university, the Hungarian Alumni Association made a generous donation to the VSU Endowment Fund.



In October 2016, the German Alumni's Forum "Dialogue between Russia and Germany: university traditions" was held at the Russian Culture and Research Centre in Berlin. Within the forum an extended meeting of the German Alumni Association of Voronezh Universities was held. The forum's programme also included around table discussion "International cooperation in higher education", exhibitions, lectures, and folk music concerts. The forum was held with financial support by the Ministry of Education and Science of the Russian Federation.

The VSU Alumni Association's website (www/alumni.vsu.ru) regularly published information about events open to VSU graduates and other visitors.

### 5.18. GRADUATES EMPLOYMENT ASSISTANCE ACTIVITIES

Career guidance and graduate employment assistance present the priority area for Career Development and Business Partnership Department (CDBPD). The department was established under the Order of the Rector No. 0035 dated 27 January 2017, as part of the Centre for Career Development of the VSU Department of Innovation and Business that provided employment assistance to VSU graduates in 2016.

The Centre's main goal was to increase VSU graduates' mobility and competitiveness on the labour market, extend social partnerships and enhance the University–Employer system. The Centre's functions also included communication with employers and analysis of the region's labour market. The aim of the Centre was to provide employment assistance and career guidance to VSU students and graduates.

### EMPLOYMENT ASSISTANCE RESULTS (VSU INNER SYSTEM)

- A job bank.
- A graduates bank containing graduates' CVs.
- Information and professional orientation events for students.
- Individual consulting of students on career determination, planning and development.
- Psychological support for students aimed at successful self-promotion in the labour market.
- Employment monitoring within one calendar year after the year of graduation.



Organizational and methodological support of the Centre's activities in 2016 included:

- 1) Extending the database of potential employers (agreements with enterprises/ companies on students internships, cooperation with enterprises and companies aimed at VSU students and graduates' employment, etc.).
- 2) Providing senior students and graduates with information from the job bank of the regional employment bodies (cooperation with Voronezh Region Employment Department).
- 3) Organising events contributing to students and graduates' successful employment (career fairs, career days, excursions to partner enterprises, presentations by employers, round table discussions with employers, etc.).
- 4) Operation of faculty bodies responsible for helping with finding jobs and for contacts with students aimed at obtaining information about the jobs of employed graduates, as well as at providing unemployed graduates with information from the job bank and employment assistance.

In 2016, the following services of the Centre for Career Development were the most demanded:

- Employment assistance for VSU graduates (consulting, participation in negotiations with employers).
- Finding jobs for VSU graduates.
- Preparing and proofreading the CVs of VSU graduates and students.
- Sending newsletters with information about vacancies and services.
- Custom vacancy search.

#### INFORMATION RESOURCES USED BY CCD

The Centre regularly provided students of all the faculties with information about labour market and current vacancies at Voronezh and the Voronezh region enterprises and organisations. The information about vacancies was available on the advertisement boards in the Main Building and on the Employment page of the VSU official website: http://job.vsu.ru.



The CCD also actively used social networking sites to inform students about the upcoming employment assistance events. CCD's official Vkontakte page (https://vk.com/centr\_kariery\_vsu) was created in 2013. The CCD also collaborates actively with official Vkontakte faculty groups. The number of followers of the CCD's page increased by 87 people and reached 897 people.

About 25% of the employed graduates from 2015/2015 used the services of the Molodezhny (Youth) employment centre and CCD advertisement boards and web portal to find a job for which they had been trained.

### **CONSULTATIVE SUPPORT FOR STUDENTS**

Regular consulting activities on self-presentation (preparing a CV, writing a cover letter, interview guidelines), professional orientation, and providing information about labour market, included the following:

- 1) Organising polls among senior students (employment plans, contact details, demand for employment assistance, etc.). In 2016, the electronic alumni database of the Centre extended by 2130 CVs.
- 2) Private consulting provided to students and graduates (on career planning and development, self-presentation skills, job interview and testing guidelines, employment, and work place adaptation). These activities were carried out throughout the academic year. 138 students and graduates received private consulting and assistance.

Consulting and information about labour market were mostly provided within the framework of career fairs, career days, excursions to partner enterprises, and presentations by employers.

Articles and materials from the federal web-portal http://labourmarket.ru were used for consulting. Abstracts of the most interesting articles were published on the Employment page of the VSU official website in Useful links section.

### **ORGANISATION OF GRADUATES' EMPLOYMENT ASSISTANCE EVENTS**

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Each year, the CCD holds two career fairs for students and graduates. Such events give students an opportunity to meet the representatives of the employers and learn more about the job specifics in various companies. They can also submit their CVs and apply for a job interview. Various events are held jointly with employers in order to inform students and graduates about the region's labour market, employment requirements, and the most popular professions. See events organised in 2016 by employers in order to present their companies to VSU students in Table 5.10.



### Table 5.10

### EMPLOYERS EVENTS ON VSU PREMISES IN 2016

EIVIPLOYERS EVENTS ON VSU PREI		10
Partner company/ Employer´s representative	Date	Event
Voronezh division of the Ministry of Foreign Affairs of the Russian Federation	12.02.2016	Career day at the Faculty of International Relations
Microsoft Customer Service Department (AnkedenOuden). DSR Corporation & OTSL Inc. (Japan) (Mr. Hatano)	18.02.2016	Lecture marathon for IT students
Atomic Energy Information Centre (Rosatom), Voronezh	16.03.2016	Excursion for 3rd year students of secondary vocational education of the Faculty of Geography, Geoecology, and Tourism.
Charitable Foundation for Support and Development of Education "New Teacher"	17.03.2016	Presentation of the leadership programme "Teacher in Russia" and a career day for pedagogics students
Analytical Centre of the Government of the Voronezh region AO Sozvezdiye	19.03.2016	Forum for students of the Faculty of Mathematics "Mathematician as a profession"
Translation agency Roid (Moscow)	23.03.2016	Workshop "Translation market"
Zdorovye Ludy pharmacy chain Zdorovy Gorod pharmacy chain Farmia pharmacy chain Visitfarm pharmacy chain	23.03.2016	Career day for students of the Faculty of Pharmaceutics
Budgetary Health Care Institution of the Voronezh region Voronezh Region Clinical Oncology Centre	23.03.2016	Enterprise tour for students of the Faculty of Chemistry
Softline	28.03.2016	Company presentation for students of the Faculty of Computer Sciences
OAO EFKO	15.04.2016	Enterprise tour for students of the Faculty of Chemistry
<i>Rian</i> company <i>Epson</i> company	24.03.2016	Company presentation for IT students
Novovoronezh nuclear power station	26.10.2015	Enterprise tour for 4th year student of the
	23.03.3016	Faculty of Geography, Geoecology, and Tourism studying at "Ecology" and "Tourism" academic programmes
Hampton by Hilton hotel Degas hotel	25.03.2016	Company tour for 4th year bachelor's degree students of the Faculty of Geography,
HolidayInn hotel	1.04.2016	- Geoecology, and Tourism
Mercure express hotel	8.04.2016	-
EFKO Group, Chemical Automatics Design Bureau, AEDON, Atos, Softline, GK Spektr, Pricewaterhousecoopers Audit, PAO Sberbank of Russia, OOO Voronezhagro, AO Severstal Distribution	8.04.2016 25.04.2016 27.04. 2016 28.04.2016	Recruitment Fair
held by IT companies DSR, RELEKS, AngelsIT Atos IT Solutions and Services.	23.04.2016	Career day for students of the Faculty of Applied Mathematics, Informatics, and Mechanics
Efirnoye, EFKO Group	6.05.2016	Enterprise tour for students of the Faculty of
	13.05.2016	Chemistry and the Faculty of Biology and Soil Sciences
	20.05.2016	
PAO Moscow Industrial Bank	12.05.2016	Partner company open day for students of the Faculty of Journalism Company presentation and information about vacancies
Petrovsky Passazh hotel	12.05.2016	Company tour for 4th year bachelor's degree students of the Faculty of Geography, Geoecology, and Tourism



### End of table 5.10

Partner company/ Employer's representative	Date	Event
RussiaToday company	23.05.2016	Career guidance lecture and a masterclass for students of the Faculty of Journalism
Chemical Automatics Design Bureau	26.05.2016	Partner company open day for students of the Faculty of Chemistry
000 Kellogg Rus	26.05.2016	<ul> <li>Partner company open day for students of the Faculty of Chemistry and the Faculty of Biology and Soil Sciences</li> </ul>
JK Efko	27.05.2016	Partner company open day for students of the Faculty of Economics
VGTRK, Moscow	08.06.2016	Career guidance tour for students of the Faculty of Journalism
PostgresProfessional company (Moscow), DataArt company (Voronezh)	07.06.2016	Company presentation for students of sciences and technical faculties
Dubna special economic zone: N.P. Fedorov Dubna machine engineering plant, the Raduga design bureau, the Aspect research and development centre	03.07–10.07	Company presentations at the student's summer school of science and technology (the Faculty of Physics)
EkoNiva-APK holding	28.07.2016	Career day for 3rd year students of the Faculty of Geography, Geoecology, and Tourism ("Geography" academic programme)
VGTRK, Moscow	2.09.2016	Career guidance tour for students of the Faculty of Journalism
Coverway company	08.09.2016	Career guidance lecture and a masterclass for students of the Faculty of Journalism
000 EFKO Food Ingredients	27.09.2016	Enterprise tour for students of the Faculty of Economics Company open day
DOO AEDON	30.09.2016 13.10.2016	Company open day Enterprise tour for students of the Faculty of Physics
Agency for Strategic Communications <i>Nikkolo</i> <i>M, Gurov and Partners</i> PR agency (Moscow)	5.10.2016	Career guidance lecture for students of the Faculty of Journalism
- DataArt, DOO Lukoil-Chernozemienefteprodukt, Atos company, Efko company, Sberbank of Russia	09.12.2016	Vacancy fair for senior students of science and technical faculties
Atos company, PAO Sberbank of Russia, Forshtadt Joint Stock Commercial Bank Voronezh Division of the Ministry of the Interior of the Russian Federation	14.11.2016	Vacancy fair for senior students of the Faculty of Law and other humanities faculties
AKB Forshtadt Sberbank of Russia	16.11.2016	Vacancy fairs for students and graduates of the Faculty of Economics and the Faculty of International Relations
Azimut hotel	16.11.2016	Career day for students of Faculty of Geography, Geoecology, and Tourism
Voronezh Regional Duma	01.12.2016	Excursion to the Parliament Centre of Voronezh Regional Duma for students of the Faculty of Law
nterregional centre for diagnostics and treatment of ontological diseases	14.12.2016	Excursion for students of the Faculty of Chemistry
000 Voronezhagro	12.12.2016 13.12.2016	Excursion for students of the Faculty of Biomedical Sciences
Central Customs Administration, Voronezh	16.12.2016	Career guidance tour for master's degree students of the Faculty of International Relatior
Zdorovy Gorod, Rigla, Pharmaimpex	22.12.2016	Career day for students of the Faculty of Pharmaceutics
- Municipal unitary enterprise Voronezh Vodokanal	21.12.2016	Career guidance tour for students of Faculty of Geography, Geoecology, and Tourism
Department of the Federal Service of Enforcement Officer of the Voronezh region	22.12.2016	Career guidance lecture for students of the Faculty of Law



Apart from taking part in various events and giving company presentations, employers contribute to training for specialists by offering educational services at their training centres, and by giving public lectures (Table 5.11).

Table 5.11

### CONTRIBUTION BY EMPLOYERS

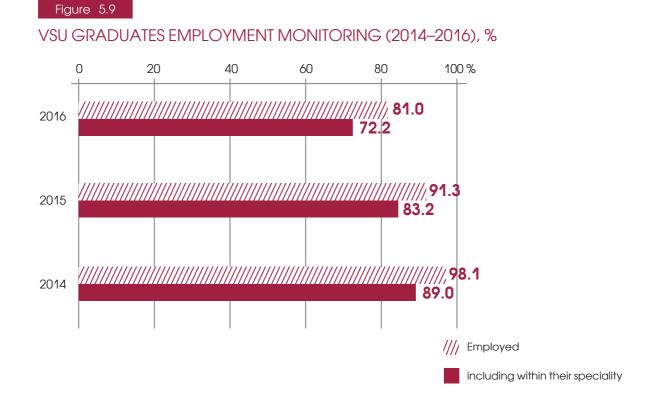
Company	Date of event	Number of hours dedicated by employer	Event	
DataArt company	16.04.2016	8	"IT NonStop" conference at VSU	
GK Efko	15.04.2016	8	Enterprise tour	
Translation agency <i>Roid</i> (Moscow)	30.03.2016	4	Webinar "Professional communication and business translation". Workshop on "Concentional Law. Theoretical aspects"	
Translation agency <i>Roid</i> (Moscow)	23.03.2016	4	Webinar "Tips to young translators"	
TV news channel <i>RussiaToday,</i> General Director's IT Councillor, Tina Berezhnaya	23.05.2016	4	"RussiaToday Week", a lecture about content strategy	
War journalist Roman Kosarev, a special correspondent of RussiaToday	20.05.2016	4	Public lecture "Journalists at war. Information that costs lives"	
Space Research Institute of the Russian Academy of Sciences	28.06.2016	2	Webinar about professional information service for analysis of satellite observation data used to evaluate and monitor renewable biological resources VEGA-PRO	
PAO Bank VTB24	28.06.2016 (graduation ceremony)	72	Further professional education programme "School of Banking"	
Atos IT Solutions and Services.	24.06.2016 (graduation ceremony)	72	Further education programme	
Industrial News of the Voronezh Region newspaper	21.06.2016	8	Training session "Project manager. Practical aspects" or "Generation PM" by Mikhail Sofonov, expert in project management	
DSR Corporation IT company	9.05-10.05.2016		Certificate awarding ceremony to graduates of the Centre's ESTC course of 2015/16	
		4	A public lecture by Naostake Hirashiva about recent trends and achievements in software development for embedded-systems	



### **GRADUATES' EMPLOYMENT MONITORING RESULTS**

Among CCD's responsibilities is the monitoring of graduate employment aimed at studying graduates' distribution along employment channels, discovering specialities that are in high demand on the market, and specialities that offer less favourable employment opportunities.

Specialists of the Centre for Career Development analysed the 2016 graduate employability index and concluded that it was seriously affected by the unfavourable economic environment of the Voronezh region (job cuts in the region and the city). It is considerably lower when compared with the previous year and amounts to 81.02% (Fig. 5.9).



According to the data presented by the Voronezh Region Employment Department about graduates who applied to employment service bodies and registered unemployed, in 2016 VSU graduates experienced more difficulties in job search process compared to graduates in 2015. Of all the graduates (2,772 people), 2.02% (56 people) applied to employment service bodies. As of December 2016, 0.9% of graduates (26 people) were registered unemployed (see Table 5.12).



### Table 5.12

### GRADUATES WHO APPLIED TO EMPLOYMENT SERVICE BODIES

Year	Number of graduates who applied to employment service bodies	Number of graduates registered unemployed						
2014	47	10						
2015	139	58						
2016	56	26						

The analysis of graduate distribution along employment channels for 2016 is shown in Table 5.13. and Fig. 5.10–5.12 reflects the labour market situation. 81.02% of the graduates from 2016 are employed. 11.50% of the graduates are in search of a job. 7.40% of graduates moved to other regions, and no information is available about them. The number of graduates on maternity leave and drafted to do military service in the Armed Forces of the Russian Federation is 5.60%. The section "Continued their studies" increased over the last year. In 2015, this sector took 40%, and in 2016, 48.50% of graduates continued their studies. Over 70% of them combine their studies with work in their professional field.

#### Table 5.13

### 2016 GRADUATE DISTRIBUTION ALONG EMPLOYMENT CHANNELS

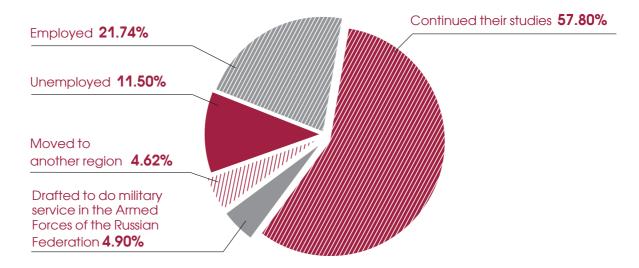
		Including				
Total number of graduates	Employed	Employed	Continued their studies	On maternity leave or drafted to do military service in the Armed Forces of the Russian Federation	Unemployed yet	Moved to another region
2772	2246	747	1344	155	319	207
100%	81.02%	26.90%	48.50%	5.60%	11.50%	7.40%

Analysis of 2016 graduates' distribution along employment channels shows that of all the **bachelor's** degree graduates (2249 people) 11.5% are unemployed, and 21.74% are employed. 57.80% bachelor's degree graduates continued their studies for master's degree programmes, 4.90% are on maternity leave and drafted to do military service in the Armed Forces of the Russian Federation. Therefore, 63.70% of graduates are potentially employed. As a result 85.44% of bachelor's degree graduates were employed. 4.62% of graduates did not leave any information about their work places.



### Figure 5.10

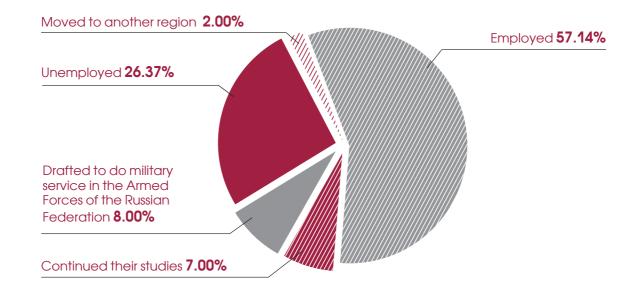
BACHELOR'S GRADUATE DISTRIBUTION ALONG EMPLOYMENT CHANNELS



Analysis of distribution of **specialist's** (91 people) and **master's** (432 people) degree graduates along employment channels shows that 26.37% of specialist's degree graduates are unemployed, 57.14% are employed, and 15.00% are potentially employed (continued their studies of were drafted to do military service in the Armed Forces of the Russian Federation), i.e. 72.14% overall. There is no information about 2.00% of graduates.

### Figure 5.11

SPECIALIST'S DEGREE GRADUATE DISTRIBUTION ALONG EMPLOYMENT CHANNELS

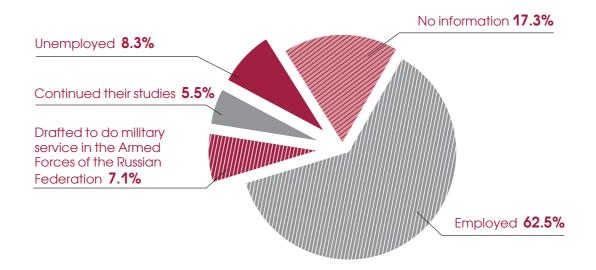




8.3% master's degree graduates are unemployed, 62.5% found a job, and 5.55% continued their studies at postgraduate school. However, 17.3% of master's degree graduates did not leave any information about they work places, as their moved to other regions. Thus, the master's graduate employment index, not counting those who did not leave any information, is 75.15%.

#### Figure 5.12

## MASTER'S DEGREE GRADUATE DISTRIBUTION ALONG EMPLOYMENT CHANNELS



The highest labour market demand is for graduates of the following major groups of specialities: mathematics and mechanics; computer and information sciences; informatics and computer facilities; electronics, radioengineering and communication systems; pharmacy; economics and management. Due to the current social and economic situation in the country, humanities and science graduates experience difficulties in primary employment.

### **KEY RESULTS:**

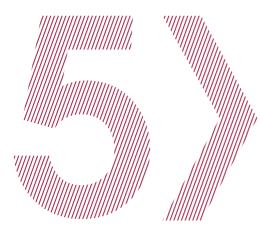
According to the CCD activity analysis for the reporting period, the development goals for the graduate employment assistance system were achieved:

- 1) Centre for Career Development official VKontakte group was functioning effectively (the number of followers incresed by 87 people and reached the number of 897 people when compare to 2015 figures).
- The centre's electronic database extended by 2130 CVs, and now contains 6258 CVs (including 2109 CVs of the 2014 graduates and 2018 CVs of 2015 graduates). The database also contains information about the graduates employment plans, contact details, etc.
- 3) 138 students and graduates received private consulting and assistance (in 2015 the figure was 115).
- 4) The number of active vacancies and applications for job interviews is increasing 52 companies listed 83 vacancies between 01.09.2015 and 01.01.2017 (in 2014/2014 academic year 48 companies listed 72 vacancies).
- 5) 52 career guidance events (vacancy fairs, career days, and company tours) aimed at assisting graduates find employment were organised and held (in 2015 40). The events were attended by 1365 people.
- 6) New forms of interactions with employers were suggested: "Partner company Open Day" – a tour of the company allowing students to learn more about manufacturing procedures and employment requirements (29 tours in 2015/16, including 3 tours in 2015, and 26 tours in 2016), – and meetings with representatives of Human Resource Departments of the companies as a part of VSU presentation sessions.
- 7) The database of potential employers was augmented by 26 companies and includes 72 VSU partner companies in total.

#### **BRIEF SUMMARY OF THE MAIN ACHIEVEMENTS IN 2016**

- 1. 52 employers contacted the Centre for Career Development in order to offer vacancies for students and graduates and present their companies within the framework of 52 career guidance events (including 29 excursions).
- 2. VSU students and graduates were informed about the upcoming events, as well as the services provided by the Centre for Career Development, and new vacancies, through the "Employment" page of the VSU official website and Vkontakte social networking site.
- 3. 820 students and graduates received consulting and assistance during training sessions and career guidance workshops. 138 students and graduates received private consulting and assistance.
- 4. The list of employers that are most popular with the VSU graduates extended by 26 companies.





# 5.19. TELECOMMUNICATIONS AND INFORMATION SYSTEM DEVELOPMENT AT VSU

In 2016, the VSU informatisation activities were focused on the following objectives:

- Maintaining and developing the university's telecommunication system, the Wi-Fi network, and the Voice over IP system.
- Maintaining and developing the information systems for the university's management, the university's official website, and all the web portals.
- Developing the Data Processing Centre of Voronezh State University, as well as user support system.
- Developing electronic education technologies, e-learning, and distant learning.

### TELECOMMUNICATIONS AND WI-FI WIRELESS NETWORK DEVELOPMENT AT VSU

The University's fibre-optics network was extended, and now connects all the buildings and most of the residence halls. Thanks to the modern equipment, the data transfer rate is now up to 10 Gbit/s.

In 2016, the following projects were implemented:

- The University's fibre-optics network now includes VSU Swimming Pool, where modern communication systems are now available to staff members, and there is a free Wi-Fi zone that covers the whole building.
- The hosting equipment at university building No.5 was upgraded, which increased the reliability of the network for users at the Faculty of Economics and the Faculty of Geography, Geoecology, and Tourism.
- The data transfer rate for the hosting server of the Faculty of Pharmaceutics was increased to 20 Gbit/s.
- New software employing DKIM/DMARC standard was developed for corporate e-mail and communication system. The software was designed to prevent email spoofing, so the users can now be sure that the origin of each message is real. The system is also effective against spam messages.



The project to provide wireless access to the network in campus buildings, which was started in 2011 on the initiative of the University administration, is still ongoing. There are now 202 Wi-Fi access points at VSU, 5 of which were installed in 2016. In 2016, an integrated hardware-software system was introduced to control the university's Wi-Fi network. The VSU wireless network now covers almost the whole territory of the University. University staff and students are authorized wireless network users in VSU is constantly growing. There were 6686 Wi-Fi access requests, including 2000 registered users.

### **VOICE OVER IP SYSTEM**

In 2016, VSU employees continued using Voice over IP – a modern and more economical alternative to municipal office phone numbers. There are now 419 subscribers at VSU using the Voice over IP network. There is a convenient version of the VoIP phone book on the University's web site.

In 2016:

- 41 VoIP phones were purchased and installed.
- VoIP-GSM gateway was introduced, which allowed to lower the cost of phone calls significantly and improve the quality of signal.
- Automated working station for cost accounting of telephone communication was modified and upgraded. The station now performs detailed individual analysis of the cost of all the phone calls. This allows to analyse costs and effectiveness of further development, and estimate expenditure.



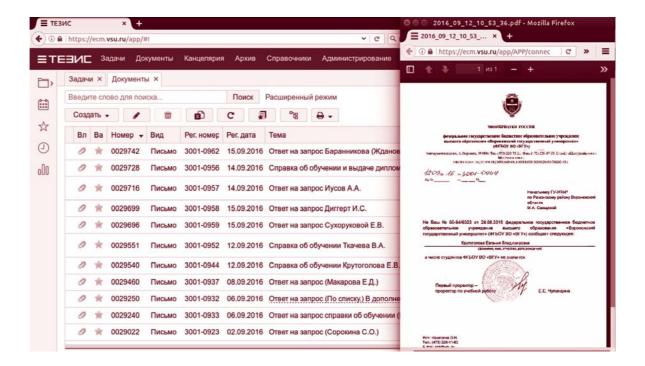
### INFORMATION SYSTEMS IN UNIVERSITY MANAGEMENT

#### Information support of document flow management

Development of the electronic document flow system (EDMS) included active use of the electronic outgoing correspondence (Fig. 5.13). Official correspondence of the university is now registered and stored by the EDMS. Access to the electronic archive was granted to the rector, the vice-rectors, and document originators. All the documents are linked by a request/response pattern. It will soon be possible to perform searches based on either the document details, or the text of the document's scanned copy.

#### Figure 5.13

### ELECTRONIC ARCHIVE OF OUTGOING CORRESPONDENCE WITHIN THE VSU ELECTRONIC DOCUMENT FLOW SYSTEM



Document flow of outgoing correspondence signed by the rector and vice-rectors exceeded 1900 documents per year. 24.5% of all the documents were submitted by academic divisions. These documents include academic certificates, diplomas, and responses to various documentation requests.

A project is currently under development which will allow to receive approval for outgoing correspondence by means of the electronic system.



#### Information support of education process

#### Admission campaign

The "Abiturieent Online" web portal (www.abitur.vsu.ru) has been the most popular of the university's internet resources during the admission campaign for many years (Fig. 5.14). In 2016, the portal traffic exceeded 700 thousand. Page traffic constituted over 2 million views. 98.18% of the visitors were from Russia, 0.79% – from Ukraine, 0.25% – from Kazakhstan, and 0.13% from Belarus.

#### Figure 5.14

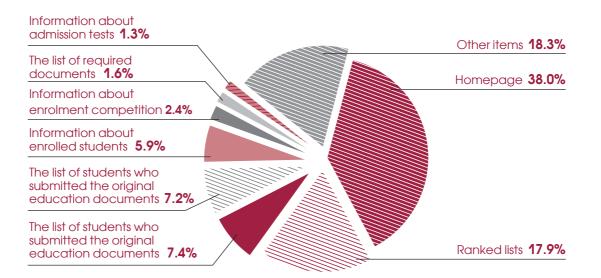


#### "ABITURIENT ONLINE" WEB PORTAL HOMEPAGE



#### Figure 5.15

#### "ABITURIENT ONLINE" WEB PORTAL TOP SECTIONS IN 2016 (BY TRAFFIC)



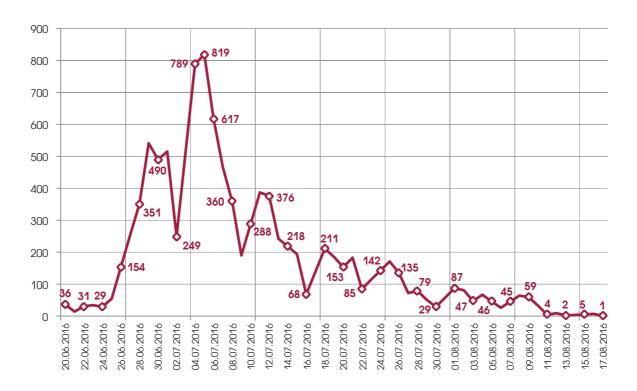
The new principle of the portal – to make the information easily accessible – proved to be a success, as the homepage traffic constituted 38% of views. The most popular sections of the portal include: web services of the "Abiturient" information system that allow prospective students to monitor their position in the ranked lists online ("Ranked lists" section – 17.9%); admission orders (7.4%); lists of students who submitted the original education documents (7.2%); information about the number of applications, vacancies and enrolment competition ("Information about enrolment competition" – 2.4%).

In 2016, over 9,000 potential VSU students filled in their application forms in the university laboratories. Potential VSU students had the opportunity to fill in their application forms in the University laboratories, where they were assisted by 130 operators. An average of 180 applications were processed every day. The most applications processed per day was over 800.



### Figure 5.16





#### Electronic system for distribution of orders on academic activities

A software system for the distribution of orders about academic activities among faculty was designed, tested, and introduced within the project "Academic Activity Automation". The unit also includes a self-management tool, an administration tool, a tool for automated filling in of a teacher's individual work plan, and a tool for staffing calculation for each academic programme.

#### **Departments ranking**

The objective of the project was to determine the activity and quality indices of the departments in the following areas:

- Teaching and methodology.
- Research conducted in accordance with the department's academic programmes.

183

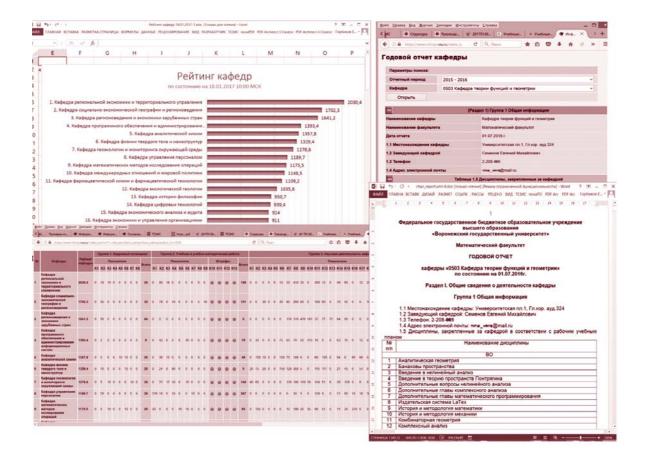
Research conducted by students.

The ranking was mainly based on the information derived from the annual department reports submitted by heads of the departments to the university's information system (www.infosys.vsu.ru) (Fig. 5.17).



### Figure 5.17

#### INTERFACE OF THE SOFTWARE UNIT FOR COLLECTING INFORMATION FORM THE DEPARTMENT'S ANNUAL REPORT AND THE SOFTWARE UNIT FOR ANALYSIS OF DEPARTMENTS RANKING (TEST VALUES ARE GIVEN)





### **VSU OFFICIAL WEBSITE**

In August 2016, following the rector's order the University Internet Centre completed a year-long project for renovating the University's official website using modern techniques. New official website with user-friendly interface and responsive web design was launched in September.

In 2016, we also renovated the following applications: WASP, the "News" section of the website's English version, "A question to the Rector", "Calendar of events", "Academic staff", "Corruption detection", "Drug-abuse detection", "Voice over IP phone book", and "VSU publications record". Two new application were introduced – "Events" and "Voting".

In 2016, the number of publications on the VSU website amounted to 1872, including 1303 news articles, and 204 announcements. In order to improve the quality of projects, a new system of project management was introduced, including a version control system, a release and task management system, and a document management system.

In 2016, traffic on the VSU official website (www.vsu.ru) amounted to 981,987 visits. Page traffic constituted 4,356,113 views with 96% of the visitors using the Russian version of the website. The number of downloaded documents in pdf, ppt, doc, and other formats, was 111,553. The average time spent on the website was 14 minutes 50 sec. (Fig. 5.18).

#### Figure 5.18

VSU OFFICIAL WEBSITE TRAFFIC IN 2016

Годовой отчет по статистике посещений официального сайта ВГУ за период с 01.01.2016 по 01.01.2017

#### количество просмотров



981 987 посещений 66% посетителей продолжают просматривать сайт после просмотра первой страницы

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	_				L
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L		_	-	,	
				-	

4 356 113 просмотров страниц



111 553 скачиваний документов (pdf, ppt, doc и пр.)



14 минут 50 секунд — средняя продолжительность посещений

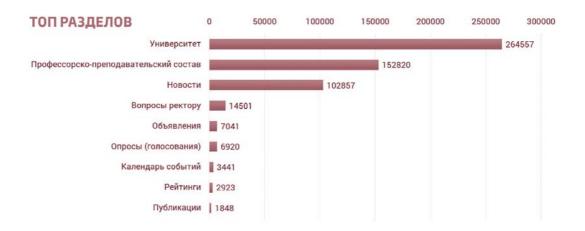




Sections "About Us", "Academic Staff", and "News" were the most popular (Fig. 5.19).

#### Figure 5.19

VSU OFFICIAL WEBSITE TOP SECTIONS IN 2016 (BY TRAFFIC)



Overall, the visitors to the website represented 162 countries. 93% of the visitors were from Russia, 1.6% from the USA, 1.1% from Ukraine, 0.6% from Romania, and 0.3% from Germany (Fig. 5.20).

#### Figure 5.20

#### GEOGRAPHICAL DISTRIBUTION OF THE WEBSITE VISITORS



#### ГЕОГРАФИЯ: 162 УНИКАЛЬНЫЕ СТРАНЫ



#### Websites

In October-November 2016, the official website of the Association of Higher Education Institutions of the Central Black Earth Region was launched (Fig. 5.21).

#### Figure 5.21

#### ASSOCIATION OF HIGHER EDUCATION INSTITUTIONS OF THE CENTRAL BLACK EARTH REGION WEBSITE'S HOMEPAGE



In November 2016, a project was launched to design a website of the English-speaking VSU graduates in order to present all the necessary information in a convenient form.

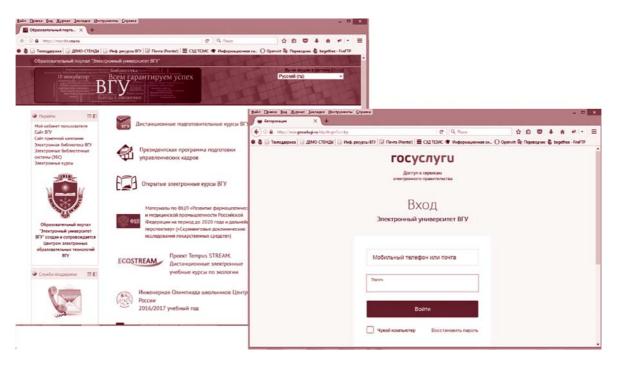


#### Electronic information educational environment

In 2016, in order to provide for better access to the university's electronic information educational environment, all the information resources of VSU were connected with the Integrated user identification and authentication system of the Russian Electronic Government portal (http://www.gosuslugi.ru). The system will allow users to switch between the university's information systems without reauthentication. The pilot project was implemented using Moodle distance education platform ("Electronic University VSU").

#### Figure 5.22

#### AUTHENTICATION INTERFACE OF THE "ELECTRONIC UNIVERSITY VSU" PORTAL BASED ON THE INTEGRATED USER IDENTIFICATION AND AUTHENTICATION SYSTEM





#### Legal reference system

Within the framework of the partnership programmes for support of Higher Educational Institutes and research, VSU faculties (the Faculty of Economics, the Faculty of International Relations, and the Faculty of Military Education) actively employed legal reference systems. All the information is now stored in information banks of the VSU Data Processing Centre (Fig. 5.23).

#### Figure 5.23

#### LEGAL REFERENCE SYSTEMS IN EDUCATION PROCESS

КонсультантПлюс 🔶 Назад 🔶 О Быстрый (	поиск 📆 Карточка поиска 💉 Прав	овой навигатор 📲 Кодек-	Генеральному директору АО ИК "Информовань-Мери Даньшину Б.И. Минок БРГАХКИ РОССИИ фекеральностоздарствение	юземье"
Консультан Профиль: Универс Новости на	строить- Строить- Сарить- Сарить- Законодательст	BO	Описантное образовательное учреженстве           образователя на поссность образователя унверситется и поссность поссность учреженствета (об БО) ВО-ВПУ»)           Унверситется и поссность учреженствета (об БО) ВО-ВПУ»)           Так (01) 253-52.1. фиц (01) 223-53.5. Боло Сорма 720, от 0711 (1230-1560) 10 1010 КПП 3600-5580-5560-0601           СИ. О. 2020 С. С. ОСТВ 102 ВО.         2020 С ОСТВ 102 ВО.	
36	Очеобила произ	1005	Уважаемый Борис Иванович!	-
	Файл Правка Вид Поиск Документы	Анализ Окна Помощь	Учебные занятия со студентами по изучению систем «Консультант I по использованию справочно-правовой информации в системах «Конс	ультант
	Основное		Плюс» в образовательном процессе по различным предметам прово компьютерных классах по месту расположения факультетов. Для собл	юдения
and the second second	меню		требований по лицензированию и государственной аккре, образовательной деятельности ВГУ необходимо обеспечить каждый фа	культет
15.03.2017 Юрлицо вправе предос работнику социальный имущественный вычет любой очередности		Новости бухучета Для уточнения инфор ападельцев Вычет по транспортр оператора системы ' Росстат разъясния, и	достаточным программным обеспечением, в том числе в области слу правовых систем. Для состветствия требованиям по данному парметру уз заведению необходимо соответствия числа обучавоцикся студентоя пиценаурованики учебных мост с доступок к поротамилому обеспечению. Просим Вас обеспечить отдельный комплект систем каждому факут образовательных программих которых есть дисциплины (учебные влигочая с пециальные информационные банки согласно специа факультетов (фармацеятический, международных отн коридический, военного образований).	небному числу новостная лента ытету, в юр изменений курсы, ьства ВУЗов, пления
15.03.2017		Страховые взносы п Больничные вскоре	Благодарим Вас за долгосрочное сотрудничество, надеемся	на его Лендарь
Минфин: юрлицо не начисляет страховые в		Doubhin andie bekopen	развитие и поддержку образовательной деятельности Ворон государственного университата	exckoro
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#### Information exchange with VSU graduates

In 2016, a system for information exchange with the university graduates was developed using free software ESPO CRM. The system will help to computerise communication with university graduates and sponsors, thus making it more effective.





#### DATA PROCESSING CENTRE OF VORONEZH STATE UNIVERSITY

The VSU Data Processing Centre (DPC), opened within the framework of the Electronic University project, was successfully operating in 2016. The project's objective is to lower resource-demanding IT-infrastructure maintenance, to maximize the effectiveness of shared resources, save energy, broaden the range of opportunities, and reduce downtime. In 2016, the Centre's computing suit was upgraded: the efficiency coefficient increased by 2.7 and the RAM – by 3.7, which allowed for higher virtual machine density per server. In 2016, the VSU Data Processing Centre provided information services crucial to administrative and education support divisions.

The Centre's computing resources were used by VSU researchers, PhD students, and students of the Faculty of Physics for their studies conducted within the framework of three projects of the Russian Foundation for Basic Research, two projects under the Government Order, two Russian-German projects conducted jointly with Leibniz Institute of Photonic Technology (Jena, Germany), and the grant of the President of the Russian Federation for support of young Russian scientists with DSc degree. The results of numerical modelling helped to explain the results of the experiments conducted as part of international projects implemented in synchrotron radiation centres BESSY II (Berlin, Germany) and Spring-8 (Hyogo, Japan). 9 articles were published following the results of the research projects.



#### **USER SUPPORT**

In 2016, VSU Information Technology Administration processed 13,786 user requests, both technical and informational (Fig. 5.24).

#### Figure 5.24

#### USER REQUESTS STATISTICS IN 2016

	0 5	00 1,0	1,5	00 2,0	000 2,5	500 3,00	3,500
January	//////////////////////////////////////	73					
February			///////// 1,28	8			
March			1,215				
April			1,044				
Мау			//////// 1,27	4			
June				1,570			
July	///////////////////////////////////////	5					
August	//////////////////////////////////////	9					
September							)///// 3,145
October			/////// 1,190				
November			////// 1,170				
December	]		85				



#### **ELECTRONIC EDUCATION TECHNOLOGIES**

#### "Electronic University VSU" web portal

"Electronic University VSU" web portal (https://moodle.vsu.ru), forms an integrated education and information system of the university in accordance with the Federal Law "On Education in the Russian Federation" and the Federal State Educational Standards. It provides 24/7 internet access to study resources from any part of the world.

In 2016, the resources also became accessible through personal accounts of students and the teaching staff. After logging in the users get access to information and study resources according to their status (a student or a teacher). The system also selects information and study courses for students basing in their academic programmes.

"Electronic University VSU" portal is integrated with such information management systems as "Contingent", "Human Resources", "Curriculum", etc. This provides for the integrity and validity of information of the portal.

In 2016, in addition to the already existing services, a number of new services for students and teachers were introduced:

- Logging in by using Wi-Fi or VSU e-mail service login information.
- Logging in through the "Gosuslugi" portal of the Integrated user identification and authentication system.
- A service for uploading senior students' graduate qualification works to the portal's database.



- Automated Antiplagiat system used to check students papers for using borrowed material without including a reference to the author or the source.
- A service for monitoring of students papers being checked by the Antiplagiat system.
- A plugin allowing teachers to add to their courses homepage a communication section for students feed-back "A message to the teacher".
- A set of web-applications that form and process electronic access requests from users. A plugin for request processing by the administrator.
- A request formation and processing system for users who have problems with access to the portal. In 2016, 2182 access recovery requests and 642 access requests were processed.

In 2016, the university continued its work on two education projects within the framework of the international Tempus programme aimed at introduction of distance learning technologies: an e-course in ecology (Faculty of Biology and Soil Sciences) and a project for foreign language teaching with application of online technologies (Faculty of Romance and Germanic Philology).

Technical and methodological support was provided to the academic staff as well as instructions on working with the "Electronic University VSU" portal. Short-term advanced training courses for teachers on how to work with the portal and create electronic teaching materials were held.

For more information about electronic education technologies, e-learning, and distant learning, see part 4.6 of the "Education" section.



### 5.20. BRIEF SUMMARY OF THE MAIN ACHIEVEMENTS IN 2016

- Material Science. A new method was developed for diffusion junction of membrane foil of PdCu ordered solid solution with the membrane unit surface. Due to retaining the ordered atomic structure of the foil, the method yields higher hydrogen permeability and selectivity of membrane elements, as compared to the already existing methods. The method can be applied in production of hydrogen ultrapurification selective membrane units (project supervisor – professor V.M. levlev, Full Member of the Russian Academy of Sciences).
- Radiophysics. New methods and algorithms were suggested for localisation signals and images in the space of their existence under various types of noise. The methods and algorithms can be used to locate position and range of uneven quasideterministic Gaussian and Poisson noise with irregular distortion. The results can be used in communication theory, location, navigation, as well as radiomonitoring and telecommunication systems (Head researcher professor A.P. Trifiniv).
- Nanoelectronics. A new method was developed for the production of ferroelectric nanocomposite materials with high dielectric dispersion within a wide range of frequencies. The results can be used to produce functional ferroelectric materials in accordance with modern radiotechnologies, micro- and nanoelectronics (Head researcher – professor A.S. Sidorkin).
- Nanotechnologies. A new method was suggested for the production of porosilicon nanopowder, which allows producing nanocrystalline silicon powder with stable bright photoluminescence and obtain particles of anocrystalline silicon that retain their luminescence properties at high temperatures. The method allows producing large amounts of nanocrystalline silicon powder without using expensive and highly inflammable substances. It can be used in dentistry and biomedicine to produce photoluminescence markers (Head researcher Associate professor P.V. Seredin).



- Industry of Nanosystems. New technological solutions were suggested for the formation of nanostructured hybrid membranes and creating potentiometric multisensor systems based on them for the reagentless express monitoring of industrial water. The results can be used in the production of new materials, instruments, and electronics, as well as by chemical, ecological, and analytical laboratories at various industrial enterprises (food, pharmaceutical, and oil chemical industries) and research institutions, government bodies, and control inspections, monitoring sewage and food water quality and pharmaceutical products (Head researcher professor O.V. Bobreshova).
- Chemistry. A water-retaining supersorbent called Solid Water was developed. 1 kg of the sorbent granules absorbs about 500 litres of water. The technology is based on the properties of water. Getting into the polymer matrix, water forms connections with its walls and becomes ice, thus becoming fixed within the sorbent. When the humidity level drops, the connections are broken, the structure of the liquid changes, and the water is released into the ground. Solid water can be effectively applied in agriculture and replace irrigation. The obvious advantage of the solid water over the traditional irrigation techniques is its economic effectiveness. It allows significantly reducing the amount of water required for irrigation (Head researchers professor V.F. Selemenev, professor V.N. Semenov, professor V.A. Kuznetsov).
- Molecular genetics. A new methodology was suggested for the genetic certification of agriculturally significant insects and mites, based on the analysis of the mitochondrial DNA nucleotide sequence. This is of great importance for express-identification of pests and genomic selection of pollinating insects and entomophages (Head researcher professor V.N. Popov).







ТЕНДЕНЦИИ РАЗВИТИЯ РЫНКА ТРУДА



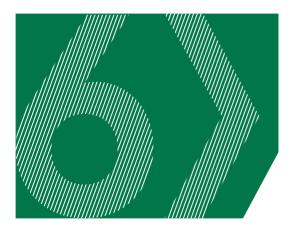












## ECONOMICS AND CONTRACT SERVICE



#### 6.1. MAJOR OBJECTIVES IN THE AREA OF ECONOMICS AND FINANCE IN 2016

The plan for Voronezh State University's financial and business operations for 2016–2018 was made and approved as a financial document that is to stipulate the required conditions, including the social, cultural, sports, leisure and recreational infrastructure necessary for education, professional activities, research, experimental projects, design and technological work, creative development, and healthcare of the students, academic and research staff, as well as other University employees.

**L.S. Korobeinikova,** Vice-Rector for Economics and Contract Services

#### VSU MAJOR OBJECTIVES IN THE AREA OF ECONOMICS AND FINANCE IN 2016

- At least 2,400.0 million roubles is to be deposited to VSU budget.
- To keep the ratio of the average salary of VSU academic and teaching staff to at least 150% of the average salary in the Voronezh region.
- To keep the ratio of the average salary of VSU researchers to at least 158% of the average salary in the Voronezh region.
- To maintain the monthly increment for the University's educational support personnel at the faculties, the university library, and Botanical garden, and for VSU's operating personnel.



### 6.2. INCOME STRUCTURE BY THE SOURCE OF FINANCING IN 2016

In 2016, the total income amounted to **2,410,041.9 thousand roubles**, including (Table 6.1, Figure 6.1):

- Government order subsidies 950,363.7 thousand roubles.
- Targeted subsidies 388,095.2 thousand roubles.
- Receipts from the provision of services to natural and legal persons on a feepaying basis – 1,071,583.0 thousand roubles.

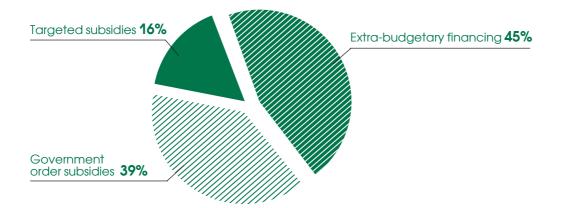
#### Table 6.1

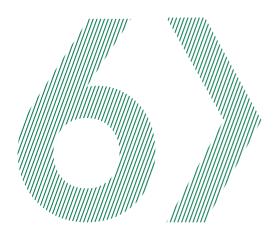
## INCOME STRUCTURE BY THE SOURCE OF FINANCING, thousand roubles

Rec	Totals	
subsidies extra-budgetary funds		TOTAIS
1,338,458.9	1,071,583.0	2,410,041.9

Figure 6.1

INCOME STRUCTURE BY THE SOURCE OF FINANCING IN 2016





### 6.3. INCOME IN 2016 COMPARED TO 2015, BROKEN DOWN BY STATE FUNDING, EXTRA-BUDGETARY FUNDING, AND TOTAL

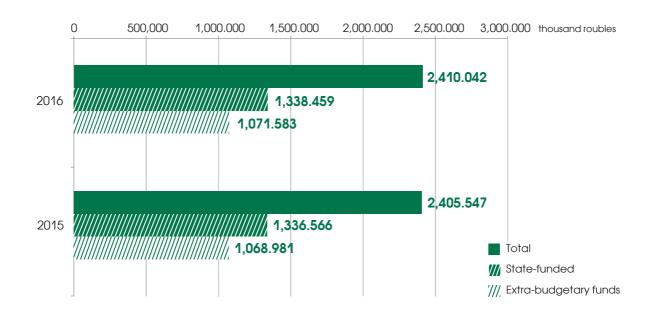
Compared to 2015, the total income in 2016 increased by **4,494.8 thousand roubles**, or 0.2% (Figure 6.2).

- Government order grants increased by 7,760.5 thousand roubles.
- Action grants increased by **14,132.3 thousand roubles**.

In 2016, extra-budgetary funding grew by **2,602.0 thousand roubles**.

#### Figure 6.2

#### INCOME IN 2016 COMPARED TO 2015





### 6.4. 2016 BUDGET EXPENDITURE REPORT

#### Table 6.2

# 2016 BUDGET EXPENDITURE REPORT RESULTS

	Cost item	Subsidies, thousand roubles	Extra- budgetary funds, thousand roubles	Total, thousand roubles	Percentage, %
211	Salaries and wages	518,967.20	545,347.70	1,064,314.90	44.0
212	Other payments	5,033.10	22,424.60	27,457.70	1.1
213	Payment charges	148,561.00	156,941.90	305,502.90	12.6
221	Communications services	-	5,903.40	5,903.40	0.2
222	Transport services	272.00	3,077.70	3,349.70	0.1
223	Utility costs	40,784.40	38,305.30	79,089.70	3.3
224	Property rental	-	937.30	937.30	0.0
225	Maintenance works and services	40,380.20	16,218.90	56,599.10	2.3
226	Other works and services	59,905.90	77,862.80	137,768.70	5.7
262*	Welfare benefits	30,119.60	805.40	30,925.00	1.3
290	Other operating expenses	326,288.70	40,993.90	367,282.60	15.2
310	Fixed asset value increase	87,582.60	42,119.00	129,701.60	5.4
340	Increase in material asset value	20,507.20	69,122.10	89,629.30	3.7
290	Land tax	28,069.00	-	28,069.00	1.2
290	Property tax	25,440.60	-	25,440.60	1.1
231	Internal debt maintenance	-	4,339.80	4,339.80	0.2
	Financing of Borisoglebsk Branch	54,898.70	-	54,898.70	2.3
	Receipts for special-purpose research	5,046.20	-	5,046.20	0.2
Totals		1,391,856.40	1,024,399.80	2,416,256.20	100.0

\* The amount of expenditure includes public obligations of welfare aid for orphaned children in the amount of 30,925.0 thousand roubles.



# 6.5. INCOME BY FACULTY AND ITS PERCENTAGE IN THE TOTAL INCOME

#### Table 6.3

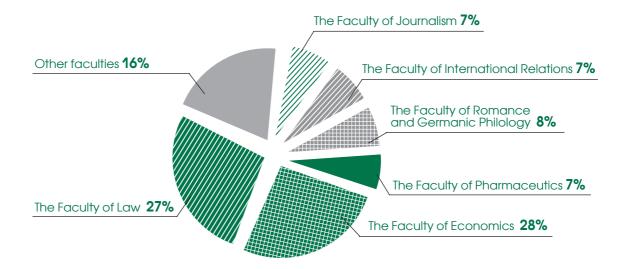
#### INCOME BY FACULTY AND ITS PERCENTAGE IN THE TOTAL INCOME

	Income,	Faculty percentage, %		
Faculty	2015/16 01.07.2015 to 31.01.2016	2016/17 01.07.2016 to 31.01.2017	2015/2016 academic year	2016/2017 academic year
The Faculty of Biomedical Sciences	1,788,045	7,183,280	0.3	1.1
The Faculty of Geography, Geoecology, and Tourism	5,292,028	5,601,450	1.0	0.9
The Faculty of Geology	4,638,425	5,155,630	0.8	0.85
The Faculty of Journalism	35,890,400	38,704,400	6.5	6.0
The Faculty of History	12,088,900	16,096,300	2.2	2.5
The Faculty of Computer Sciences	12,754,250	14,822,250	2.3	2.3
The Faculty of Mathematics	1,794,000	2,544,900	0.3	0.4
The Faculty of International Relations	41,275,460	46,090,450	7.4	7.2
The Faculty of Applied Mathematics, Informatics, and Mechanics	15,684,764	16,083,960	2.8	2.5
The Faculty of Romance and Germanic Philology	44,127,336	57,886,360	8.0	9.0
The Faculty of Pharmaceutics	38,904,413	40,558,915	7.0	6.3
The Faculty of Physics	3,236,670	5,016,550	0.6	0.85
The Faculty of Philology	10,046,288	12,172,050	1.8	1.9
The Faculty of Philosophy and Psychology	13,171,480	15,131,900	2.4	2.4
The Faculty of Chemistry	2,718,800	3,062,740	0.5	0.5
The Faculty of Economics	154,858,698	167,065,350	27.9	26.1
The Faculty of Law	150,191,868	177,951,350	27.1	27.8
The Institute of International Education	6,149,150	9,089,960	1.1	1.4
Total	554,610,975	640,217,795	100.0	100.0



Figure 6.3

INCOME STRUCTURE BY FACULTY IN THE 2016/2017 ACADEMIC YEAR



### 6.6. PROCUREMENT SERVICE REPORT

In 2016, 1,872 agreements were signed. The sources of financing were subsidies obtained from the Russian Federation state budgetary resources, grants, funds obtained from the execution of state contracts, as well as funds obtained from individuals and legal entities through other income-generating activities. Under completed contracts, upon the placement of orders for purchasing goods, works, and services, the main sources of financing for the purchasing activities were grants, funds obtained from the execution of state contracts, as well as funds obtained from individuals and legal entities through other income-generating activities were grants, funds obtained from the execution of state contracts, as well as funds obtained from individuals and legal entities through other income-generating activities.

The analysis of the contents and structure of the contracts signed in 2016 by source of financing is shown in Table 6.4 and Figure 6.4.



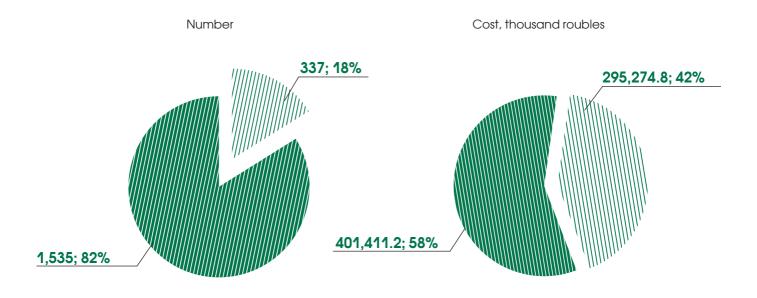
#### Table 6.4

#### ANALYSIS OF THE CONTENTS AND STRUCTURE OF THE CONTRACTS SIGNED IN 2016 BY SOURCE OF FINANCING

		Volume of the contracts signed in 2016				
No	Source of financing	number	percentage of the total, %	cost, thousand roubles	percentage of the total, %	
1	Grants, funds obtained from contract execution, as well as funds obtained from individuals and legal entities through other income-generating activities	1,535	82.0	295,274.8	42.4	
2	Subsidies obtained from the Russian Federation state budgetary resources	337	18.0	401,411.2	57.6	
	Total	1,872	100.0	696,686.0	100.0	

#### Figure 6.4

#### VOLUME OF THE CONTRACTS SIGNED IN 2016



Grants, funds obtained from execution of contracts, as well as funds obtained from individuals and legal entities through other income-generating activities

#### $\parallel \parallel \mid$ Subsidies obtained from the Russian Federation state budgetary resources



The financing of purchasing activities through subsidies amounted to 57.6% of the total volume of purchases in the reporting period, while the amount of funds obtained from grants and other financing sources was 42.4% of the total volume of purchases.

Information about the contracts signed through various methods of competitive selection of suppliers is shown in Table 6.5 and in Figure 6.5.

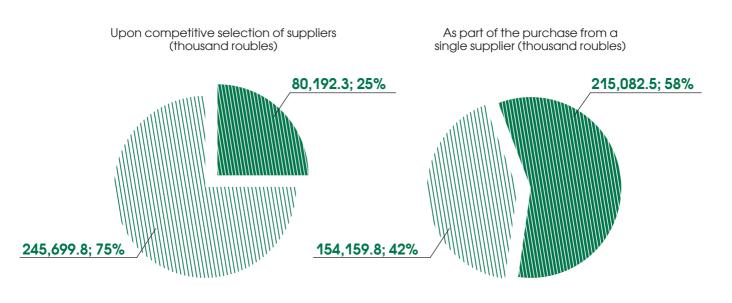
#### Table 6.5

#### VOLUME OF THE CONTRACTS SIGNED AS PART OF THE ORDER PLACEMENT FOR PURCHASING GOODS, WORKS, AND SERVICES IN 2016

<u>'////</u>							
No	Source	Volume of the contracts signed upon competitive selection of suppliers		Volume of the contracts signed as part of the purchase from a single supplier		Total volume of signed contracts	
	of financing	cost, thousand roubles	percentage of the total, %	cost, thousand roubles	percentage of the total, %	cost, thousand roubles	percentage of the total, %
1	Grants, funds obtained from contract execution, as well as funds obtained from individuals and legal entities through other income-generating activities	80,192.3	24.6	215,082.5	58.2	295,274.8	42.4
2	Subsidies obtained from the Russian Federation state budgetary resources	245,699.8	75.4	154,159.8	41.8	401,411.2	57.6
	Total	325,892.1	100.0	369,242.3	100.0	696,686.0	100.0

Figure 6.5

#### VOLUME OF THE CONTRACTS SIGNED IN 2016



- Grants, funds obtained from execution of contracts, as well as funds obtained from individuals and legal entities through other income-generating activities
- //// Subsidies obtained from the Russian Federation state budgetary resources



Let us perform the analysis of the contents and structure of the contracts financed through subsidies obtained from the Russian Federation state budgetary resources, signed through various methods of competitive selection of suppliers in 2016 (Table 6.6, Figures 6.6 and 6.7.).

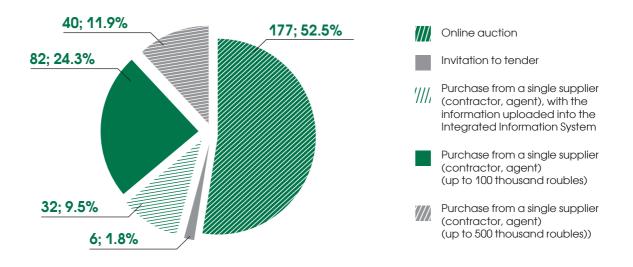
#### Table 6.6

ANALYSIS OF THE CONTENTS AND STRUCTURE OF THE CONTRACTS FINANCED THROUGH SUBSIDIES OBTAINED FROM THE RUSSIAN FEDERATION STATE BUDGETARY RESOURCES, SIGNED THROUGH VARIOUS METHODS OF COMPETITIVE SELECTION OF THE SUPPLIER

	Volume of contracts signed in 2016					
Methods of selection of the supplier	number	percentage of the total, %	cost, thousand roubles	percentage of the total, %		
Online auction	177	52.5	245,699.8	61.2		
Invitation to tender	6	1.8	1,551.6	0.4		
Purchase from a single supplier (contractor, agent), with the information uploaded into the Integrated Information System	32	9.5	138,071.3	34.4		
Purchase from a single supplier (contractor, agent) (up to 100 thousand roubles)	82	24.3	4,551.8	1.1		
Purchase from a single supplier (contractor, agent) (up to 500 thousand roubles)	40	11.9	11,536.7	2.9		
Total	337	100.0	401,411.2	100.0		

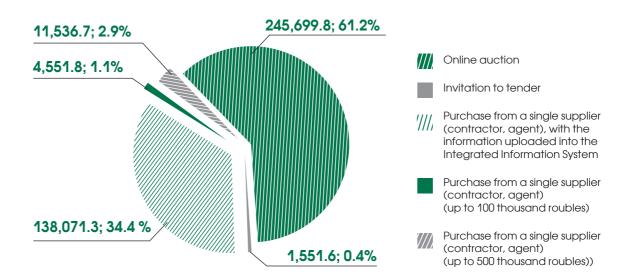
#### Figure 6.6

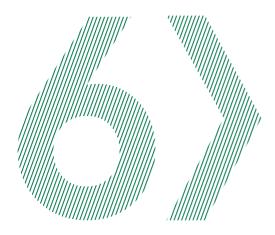
VOLUME OF THE CONTRACTS FINANCED THROUGH SUBSIDIES OBTAINED FROM THE RUSSIAN FEDERATION STATE BUDGETARY RESOURCES, SIGNED THROUGH VARIOUS METHODS OF COMPETITIVE SELECTION OF THE SUPPLIER



#### Figure 6.7

VOLUME OF THE CONTRACTS FINANCED THROUGH SUBSIDIES OBTAINED FROM THE RUSSIAN FEDERATION STATE BUDGETARY RESOURCES, SIGNED THROUGH VARIOUS METHODS OF COMPETITIVE SELECTION OF THE SUPPLIER, thousand roubles





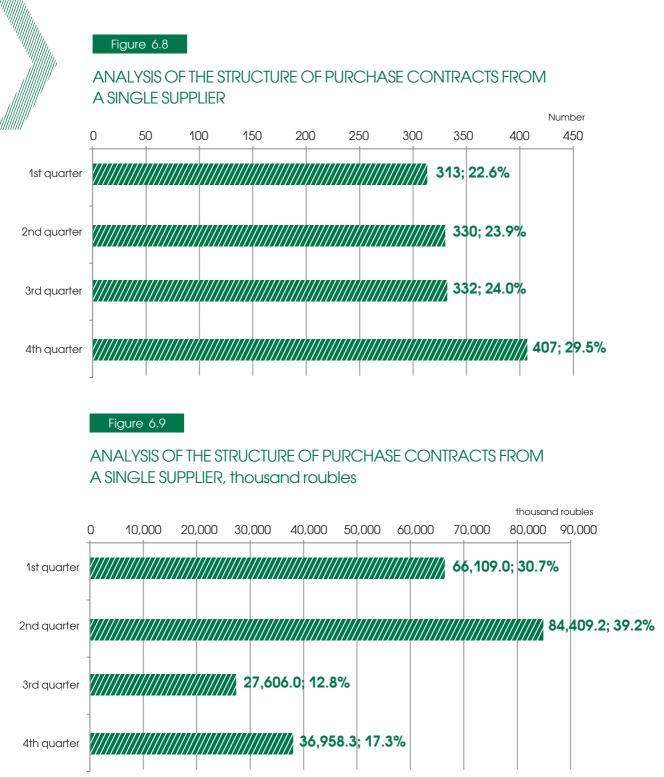
Based on the statistics presented in Table 6.6, we can point out that the contracts funded with subsidies obtained from the Russian Federation state budgetary resources were mainly signed as a result of online auctions (61.2% of the total volume of the contracts signed), the purchases being from single suppliers (contractor, agent), with the information uploaded into the Integrated Information System (34.4% of the total volume of the contracts signed using this source of financing).

Other sources of financing were grants, funds obtained from execution of contracts, as well as funds obtained from individuals and legal entities through other incomegenerating activities. The analysis of the structure of purchase contracts from single suppliers, in the quarterly periods of 2016, is shown in Table 6.7 and Figures 6.8 and 6.9.

#### Table 6.7

#### ANALYSIS OF THE STRUCTURE OF PURCHASE CONTRACTS FROM A SINGLE SUPPLIER

Quarterly periods of	Volume of contracts signed in 2016 using grants, funds obtained from the execution of state contracts, as well as funds obtained from individuals and legal entities through other income-generating activities						
2016	number	percentage of the total, %	cost, thousand roubles	percentage of the total, %			
1st quarter	313	22.6	66,109.0	30.7			
2nd quarter	330	23.9	84,409.2	39.2			
3rd quarter	332	24.0	27,606.0	12.8			
4th quarter	407	29.5	36,958.3	17.3			
Total	1,382	100	215,082.5	100			



Based on the information presented in Table 6.7, we can state that, as for the number of purchase contracts from a single supplier, the maximum percentage (29.5%) was accounted for by the purchases in the 4th quarter of 2016. As regards this indicator in terms of value, the maximum share of the contracts were signed in the 2nd quarter of 2016 (39.2%).

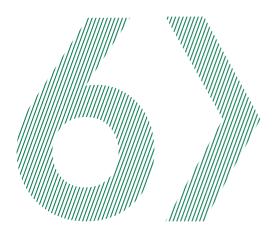


Table 6.8 and Figures 6.10 and 6.11 demonstrate the content and structure of purchase contracts from a single supplier by the main expenditures of FGBOU VO VSU (property, plant, and equipment, expendable materials, research, renovations, utility services, teaching services provided by third-party employees, as well as other expenses).

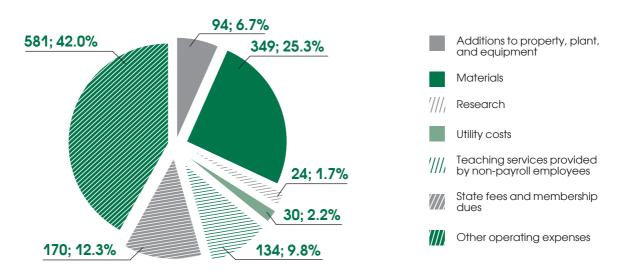
#### Table 6.8

#### ANALYSIS OF THE CONTENT AND STRUCTURE OF PURCHASE CONTRACTS FROM A SINGLE SUPPLIER BY THE MAIN EXPEDITURES

Expenditures	Volume of the contracts signed in 2016 using grants, funds obtained from the execution of state contracts, as well as funds obtained from individuals and legal entities through other income-generating activities						
	number	percentage of the total, %	cost, thousand roubles	percentage of the total, %			
Additions to property, plant, and equipment	94	6.7	10,481.5	4.9			
Materials	349	25.3	43,149.7	20.0			
Research	24	1.7	33,787.7	15.8			
Renovations	0	0	0	0			
Utility costs	30	2.2	43,789.9	20.4			
Teaching services provided by non-payroll employees	134	9.8	2,112.2	1.0			
State fees and membership dues	170	12.3	4,217.0	1.9			
Other operating expenses	581	42.0	77,544.5	36.0			
Total	1,382	100.0	215,082.5	100.0			

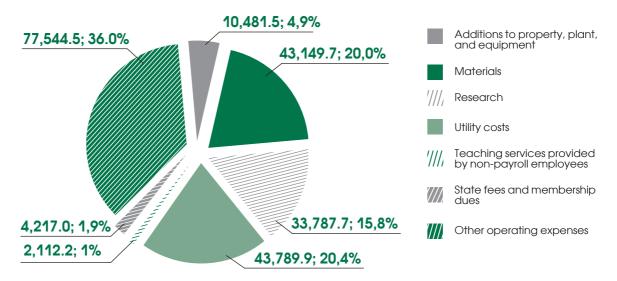
#### Figure 6.10

#### ANALYSIS OF THE CONTENT AND STRUCTURE OF PURCHASE CONTRACTS FROM A SINGLE SUPPLIER BY THE MAIN EXPEDITURES



#### Figure 6.11

#### ANALYSIS OF THE CONTENT AND STRUCTURE OF PURCHASE CONTRACTS FROM A SINGLE SUPPLIER BY THE MAIN EXPEDITURES, thousand roubles



The analysis of the content and structure of purchase contracts from a single supplier shown in Table 6.8 demonstrates that the majority of expenses were related to contracts signed for other operating expenses (42% by number and 36% by value of the total value of purchase contracts from a single supplier).



The unified schedule of orders from Voronezh State University subdivisions was created using a unified purchase request form that exists on the VSU website. In the reporting period, 1,252 requests were accepted from the structural subdivisions as part of the registration procedure. Certain subdivisions did not submit requests during the fixed planning dates. These types of purchase requests were to be included in the time-schedules based on written statements from the subdivisions and changes to the time-schedules in the shared information space (the purchasing website). Table 6.9 and Figure 6.12 present information about the number of submitted requests and their modifications.

#### Table 6.9

## INFORMATION ON THE NUMBER OF REQUESTS AND THEIR MODIFICATIONS

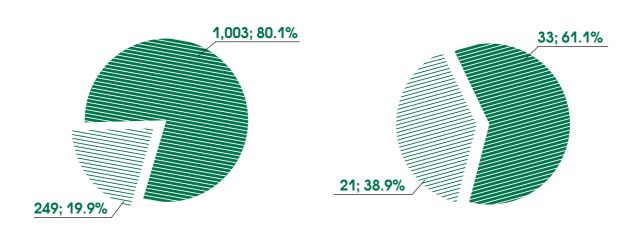
<u>       </u>		<u></u>	<u> </u>	<u>                                     </u>	<u>                                     </u>
No			on the requests mitted	Number of changes to the time-schedule	
	Source of financing	number	percentage of the total, %	number	percentage of the total, %
1	Grants, funds obtained from contract execution, as well as funds obtained from individuals and legal entities through other income-generating activities	1,003	80.1	33	61.1
2	Subsidies obtained from the Russian Federation state budgetary resources	249	19.9	21	38.9
	Total	1,252	100.0	54	100.0

#### Figure 6.12

Number of applications

#### INFORMATION ON THE NUMBER OF REQUESTS AND THEIR MODIFICATIONS

Number of changes to the time-schedule



Grants, funds obtained from execution of contracts, as well as funds obtained from individuals and legal entities through other income-generating activities

 $||||_{L}$  Subsidies obtained from the Russian Federation state budgetary resources



As part of the implementation of Federal Law No. 223-FZ of 18 July 2011, 1,003 requests were accepted and 1,535 contracts were signed for the amount of 295,274.8 thousand roubles.

During the formation of a unified purchasing plan as part of the implementation of Federal Law No. 44-FZ of 5 April 2013, 249 requests were accepted for the total amount of 354,610.1 roubles. There were 337 contracts signed for the amount of 401,411.2 roubles.

The information on the cost savings as a result of competitive selection of suppliers is shown in Table 6.10 and Figure 6.13.

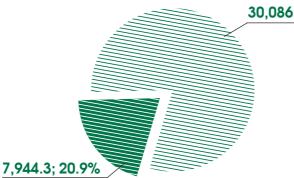
#### Table 6.10

## AMOUNT OF MONEY SAVED THROUGH THE COMPETITIVE SELECTION OF SUPPLIERS, BY SOURCE OF FINANCING

No	Source of financing	volume of the contracts signed upon competitive selection of suppliers		Initial maximu cont		Cost cutting	
		cost, thousand roubles	percentage of the total, %	cost, thousand roubles	percentage of the total, %		percentage of the total, %
1	Grants, funds obtained from contract execution, as well as funds obtained from individuals and legal entities through other income-generating activities	80,192.3	24.6	88,136.6	24.2	7,944.3	20.9
2	Subsidies obtained from the Russian Federation state budget resources	245,699.8	75.4	275,786.0	75.8	30,086.2	79.1
	Total	325,892.1	100.0	363,922.6	100.0	38,030.5	100.0

#### Figure 6.13

#### AMOUNT OF MONEY SAVED, thousand roubles



#### 30,086.2; 79.1%

- Grants, funds obtained from execution of contracts, as well as funds obtained from individuals and legal entities through other income-generating activities
- ////, Subsidies obtained from the Russian Federation state budgetary resources

The data presented in Table 6.10 demonstrate that a large amount of the financial savings – 79.1% of the total cost savings – appeared in the source of financing (subsidies obtained from the Russian Federation state budgetary resources). The money saved amounted to 38,030.5 roubles, or 12.2% of the initial maximum cost of the contracts included in the purchasing time-schedule. The purchases made as part of the implementation of Federal Law No. 223-FZ resulted in financial savings of 7,944.3 thousand roubles, which is 20.9% of the total cost savings.



### 6.7. ANALYSIS OF VSU FINANCIAL ACTIVITIES

VSU's financial standing may be characterized by the use of funds obtained from various financial sources, as well as the use of assets.

In accordance with the balance sheet statistics, the aggregate structure and change in VSU's assets and the sources of their formation are demonstrated in Tables 6.11 and 6.12.

#### Table 6.11

## VSU ASSET DYNAMICS IN 2016 (ACCORDING TO THE DATA FROM THE BALANCE SHEET)

No	Asset items	As of the beginning of 2016	As of the end of 2016	Absolute change	Growth ratio, %			
	I. Non-financial assets, thousand roubles							
1	Property, plant, and equipment (residual value)	1,363,733.0	1,528,457.6	+164,724.6	112.1			
2	Intangible assets (residual value)	4.0	192.2	+188.2	4,805.0 (48.1 times)			
3	Non-produced assets	2,902,966.3	2,893,393.6	-9,572.7	99.7			
4	Material inventories	22,865.9	28,414.8	+5,548.9	124.3			
5	Investments in non-financial assets	204,817.5	58,421.6	-146,395.9	28.5			
6	Total non-financial assets	4,494,386.7	4,508,879.8	+14,493.1	100.3			
	II. Financial assets, thousand roubles							
7	Cash and cash equivalents	23,588.1	19,661.6	-3,926.5	83.4			
8	Settlement of revenues	18,259.2	6,921.9	-11,337.3	37.9			
9	Settlement of advance paid out	7,708.8	3,971.0	-3,737.8	51.5			
10	Settlement with accountable persons	220.0	118.5	-101.5	53.9			
11	Settlement of property damaged		35.0	+35.0	-			
12	Settlement of VAT	553.5	4,381.7	+3,828.2	791.6 (7.9 times)			
13	Settlement with founders (residual value of most valuable assets)	(4,076,881.4)	(4,208,646.9)	+(131,765.5)	103.2			
14	Settlement of payments into the budget	46.9	614.4	+567.5	1,310.0 (13.1 times)			
15	Total financial assets	(4,026,504.9)	(4,172,942.8)	+(146,437.9)	103.6			
16	Total VSU assets (grand total)	467,881.8	335,937.0	-131,944.8	71.8			



#### Table 6.12

### VSU ASSET DYNAMICS IN 2016 (ACCORDING TO THE DATA FROM THE BALANCE SHEET)

No	Liability items	As of the beginning of 2016	As of the end of 2016	Absolute change	Growth ratio, %		
	I. Liabilities, thousand roubles						
1	Accounts payable to bond creditors	15,500.0	14,000.0	-1,500.0	90.3		
2	Settlement of accepted obligations	19,628.9	66,895.3	+47,266.5	340.8 (3.4 times)		
3	Settlement of payments into the budget	47,026.5	48,784.0	+1,757.5	103.7		
4	Settlement of revenues	270,611.4	230,184.1	-40,427.3	85.1		
5	Settlement of loans	6,732.3	7,300.0	+567.7	108.4		
6	Settlement with bailors	3,013.8	3,607.7	+593.9	119.7		
7	Settlement with accountable persons	9.4	41.5	+32.1	441.5 (4.4 times)		
8	Total liabilities	362,522.3	370,812.6	+8,290.3	102.3		
II. Financial results, thousand roubles							
9	Financial results from the previous reporting periods	(458,535.5)	(621,126.7)	+(162,591.2)	135.5		
10	Financial results from accrual of depreciation of the most valuable assets	500,752.9	509,341.6	+8,588.7	101.7		
11	Prepaid expenses	(1,895.3)	(3,691.3)	-5,586.6	194.8		
12	Provisions for future liabilities	65,037.4	80,600.8	+15,563.4	123.9		
13	Total financial results of VSU	105,359.5	(34,875.6)	-140,235.1	×		
14	Total sources of VSU assets (grand total)	467,881.8	335,937.0	-131,944.8	71.8		

In 2016, the grand total was 335,937.0 thousand roubles, a decrease of 131,944.8 thousand roubles (28.2%). However, the value does not reflect the real cost of VSU assets. It can be explained by the fact that the large part of it is land and buildings and most valuable movable assets are assigned to the university by the founder (the Ministry of Education and Science of the Russian Federation) on the basis of operational management account. In accordance with the budgetary accounting and accounting reporting rules for state-funded institutions, the cost of such assets should be shown in the balance sheet as payables, i.e. settlement with founders (Section II Financial assets) and should be marked with a negative sign. This fact caused a significant decrease in the grand total (at the beginning of 2016 of 4,076,881.4 thousand roubles and at the end of 2016 of 4,206,646.9 thousand roubles).



The economic substance of the accounts payable to the founder shown in the balance sheet implies, on the one hand, the liabilities which are fully secured by the assets assigned to the university on the basis of the long-term operational management account and which do not require settlement using monetary funds or funds expected from the debtors, while on the other hand they may be assumed to be equivalent to the founder's contribution to the authorized fund (capital) like in the case of for-profit organizations. The dynamics of the real total asset and the sources of their formation are shown in Tables 6.13 and 6.14.

#### Table 6.13

### VSU REAL ASSET DYNAMICS IN 2016

#### (ACCORDING TO THE DATA FROM THE ANALYTICAL DATA SHEET)

No	Asset items	As of the beginning of 2016	As of the end of 2016	Absolute change	Growth ratio, %			
	I. Non-financial assets, thousand roubles							
1	Property, plant, and equipment (residual value)	1,363,733.0	1,528,457.6	+164,724.6	112.1			
2	Intangible assets (residual value)	4.0	192.2	+188.2	4,805.0 (48.1 times)			
3	Non-produced assets	2,902,966.3	2,893,393.6	-9,572.7	99.7			
4	Material inventories	22,865.9	28,414.8	+5,548.9	124.3			
5	Investments in the non-financial assets	204,817.5	58,421.6	-146,395.9	28.5			
6	Total non-financial assets	4,494,386.7	4,508,879.8	+14,493.1	100.3			
	II. Financial assets, thousand roubles							
7	Cash and cash equivalents	23,588.1	19,661.6	-3,926.5	83.4			
8	Settlement of revenues	18,259.2	6,921.9	-11,337.3	37.9			
9	Settlement of advance paid out	7,708.8	3,971.0	-3,737.8	51.5			
10	Settlement with accountable persons	220.0	118.5	-101.5	53.9			
11	Settlement of property damaged		35.0	+35.0	-			
12	Settlement of VAT	553.5	4,381.7	+3,828.2	791.6 (7.9 times)			
13	Settlement of payments into the budget	46.9	614.4	+567.5	1,310.0 (13.1 times)			
14	Total financial assets	50,376.5	35,704.1	-14,672.4	70.9			
15	Total VSU assets	4,544,763.2	4,544,583.9	-179.3	99.9			

#### Table 6.14

## DYNAMICS OF THE SOURCES OF FORMATION OF VSU ASSETS IN 2016 (ACCORDING TO THE DATA FROM THE ANALYTICAL DATA SHEET)

No	Asset items	As of the beginning of 2016	As of the end of 2016	Absolute change	Growth ratio, %
	I. Liabilities to the fou	nder, thousai	nd roubles		
1	Settlement with founders (residual value of most valuable assets)	4,076,881.4	4,208,646.9	+131,765.5	103.2
	II. Liabilities to the cre	ditors, thousc	ind roubles		
2	Accounts payable to bond creditors	15,500.0	14,000.0	-1,500.0	90.3
3	Settlement of accepted obligations	19,628.9	66,895.3	+47,266.4	340.8 (3.4 times)
4	Settlement of payments into the budget	47,026.5	48,784.0	+1,757.5	103.7
5	Settlement of revenues	270,611.4	230,184.1	-40,427.3	85.1
6	Settlement of loans	6,732.3	7,300.0	+567.7	108.4
7	Settlement with bailors	3,013.8	3,607.7	+593.9	119.7
8	Settlement with accountable persons	9.4	41.5	+32.1	441.5 (4.4 times)
9	Total liabilities to the creditors	362,522.3	370,812.6	+8,290.3	102.3
	II. Financial results (intern	al funds), tho	usand rouble	es.	
10	Financial results of the previous reporting periods	(417,191.6)	(621,126.7)	+(203,935.1)	148.9
11	Financial results from accrual of depreciation of most valuable assets	443,968.3	509,341.6	+65,643.3	114.7
12	Prepaid expenses	-	(3,691.3)	-3,691.3	×
13	Provisions for future liabilities	-	80,600.8	+80,600.8	×
14	Total financial results of VSU	26,776.7	(34,875.6)	-61,652.3	×
15	Total sources of asset formation	4,281,037.0	4,544,583.9	+263,546.9	99.9

In 2016, the aggregate value of assets, including the ones assigned by the founder on the basis of operational management account, decreased insignificantly by 179.3 thousand roubles (0.1%), and by the end of the reporting period amounted to 4,544,583.9 thousand roubles. The dynamics in VSU assets came against the background of an increase in fixed assets (of 164,724.6 thousand roubles or 12.1%) and at the same time a decrease in investments in non-financial assets (of 146,395.9 thousand roubles, or by 3.5 times), mainly through the commissioning of the swimming pool and a gas boiler station. All in all, non-financial assets increased by 14,493.1 thousand roubles (0.3%). At the same time, there was a decrease of 14,672.4 thousand roubles, or 29.1%, in the most mobile part of VSU assets (monetary funds and accounts receivable).



As of the end of 2016, the largest percentage in VSU's asset structure were the non-produced assets (land) (63.7%) and property, plant, and equipment (33.6%). An increase in the non-financial assets in the reporting year led to a decrease in financial assets from 1.1 to 0.8% (Table 6.15).

#### Table 6.15

#### VSU ASSET STRUCTURE IN 2016

## (ACCORDING TO THE DATA FROM THE ANALYTICAL DATA SHEET)

			Percentage, %		
No	Indicator	as of the beginning 2016 years	as of the end 2016 years	Change (+, -)	
1	Non-financial assets – total	98.9	99.2	+0.3	
	Including: property, plant, and equipment (residual value)	30.0	33.6	+3.6	
	non-produced assets	63.9	63.7	-0.2	
	material assets	0.5	0.6	+0.1	
	investments in non-financial assets (capital investments)	4.5	1.3	-3.2	
2	Financial assets – total	1.1	0.8	-0.3	
	Including: cash and cash equivalents	0.5	0.4	-0.1	
	settlements with debtors	0.6	0.4	-0.2	
3	Total Assets	100.0	100.0	-	

In 2016, a decrease in the sources of VSU asset formation of 179.3 thousand roubles (0.1%) was against the background of an increase in the liabilities to the founder regarding the property assigned to the university on the basis of operational management account (land, real estate, and most valuable assets). It resulted from VSU's acceptance of the entry of the swimming pool and a gas boiler station into the books as an article of fixed assets (see Table 6.8).

Also, there has been an increase in the liabilities to the creditors of 8,290.3 thousand roubles (2.3%) resulting from an increase in accounts payable for the settlement of accepted obligations (trade payables) and payments into the budget (of VAT).

In 2016, the financial result was negative due to a net operating loss in the reporting period and a corresponding growth in loss from the operating activities of previous reporting periods of 162,592.2 thousand roubles or 1.4%.



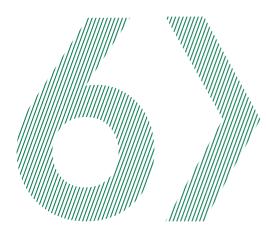
The structure of sources of the formation of VSU assets in 2016 (Table 6.16) only includes liabilities to the founder regarding the land, property, plant, and equipment assigned to the University on the basis of operational management account (92.6%) and liabilities to the creditors (8.2%). The negative financial result in the reporting period led to a deficit of internal funds.

#### Table 6.16

## STRUCTURE OF THE SOURCES OF VSU ASSET FORMATION IN 2016 (ACCORDING TO THE DATA FROM THE ANALYTICAL DATA SHEET)

		Percent	Percentage, %		
No	Indicator	as of the beginning 2016 years	as of the end 2016 years	Change (+, -)	
1	Liabilities to the founder	89.7	92.6	+2.9	
2	Liabilities to the creditors – total	8.0	8.2	+0.2	
	Including: settlement of revenues	6.0	5.1	-0.9	
	settlement of accepted obligations	0.4	1.5	+1.1	
	settlement of payments into the budget	1.0	1.1	+0.1	
	other accounts payable	0.6	0.5	-0.1	
3	Financial results (internal funds) – total	2.3	(0.8)	-3.1	
	Including: financial results of the previous reporting periods	(10.1)	(13.7)	+(2.6)	
	financial results from accrual of depreciation of most valuable assets	11.0	11.2	+0.2	
	provisions for future liabilities	1.4	1.8	+0.4	
4	Total sources of asset formation	100.0	100.0	-	

An increase in state funding of the University's activities resulted in a decrease of the share of equity capital used for purchasing and building new property, plant, and equipment. In 2016, only 21.7% of additions to property, plant, and equipment and 14.0% of expenditures for capital construction and other fixed asset investment was financed by VSU (Tables 6.17 and 6.18). The share of subsidies was 78.3 and 86.0% respectively. The previous year, the share of internal funds in total investment was more significant. Such favourable conditions allowed using the earned internal funds to fund other kinds of activities. However, similar to previous years, considerable capital expenditures in the amount of 131,209.7 thousand roubles (81,644.9 + 49,564.8) is one of the main reasons for the fall in the University's funds and the deterioration in its liquidity.



<u>Table 6.17</u>

## STRUCTURE AND DYNAMICS OF THE ADDITIONS TO PROPERTY, PLANT, AND EQUIPMENT BY FINANCIAL SOURCES

	2015		2016		Change (+, -)	
Financial source	thousand roubles	percentage, %	thousand roubles	percentage, %	thousand roubles	percentage, %
Property, plant and equipment purchased – total	339,001.7	100.0	375,770.9	100.0	+36,769.2	-
Including: funded by VSU	80,782.0	23.8	81,644.9	21.7	+862.9	-2.1
through governmental order subsidies	258,219.7	76.2	294,126.0	78.3	+35,906.3	+2.1

Table 6.18

### STRUCTURE AND DYNAMICS OF DEVELOPMENT EXPENDITURES AND OTHER INVESTMENTS INTO PROPERTY, PLANT, AND EQUIPMENT, BY FINANCIAL SOURCES

		2015		2016		Change (+, -)	
Financial source		thousand roubles	percentage, %	thousand roubles	percentage, %	thousand roubles	percentage, %
ar ini	evelopment expenditures ad other investments to property, plant, and quipment – total	512,799.4	100.0	353,831.8	100.0	-158,967.6	-
In	cluding: funded by VSU	133,229.6	26.0	49,564.8	14.0	-83,664.8	-12.0
	through governmental order subsidies	258,065.1	50.3	254,186.7	71.8	-3,878.4	+21.5
	other subsidies	38,004.7	7.4	50,080.3	14.2	+12,075.6	+6.8
	capital expenditure subsidies	83,500.0	16.3	-	-	-83,500.0	-16.3



In 2016, major capital investments into property, plant, and equipment had a positive impact on the depreciation of these assets (as of the end of the year it reached 44.1%). As for VSU's real estate, this figure is even smaller – 18.4%. The book value of fixed assets increased by 285,959.6 thousand roubles, or 11.7% (Table 6.19).

#### Table 6.19

### ANALYSIS OF VSU'S FIXED ASSET DEPRECIATION

' <u>///////</u>					<u> </u>
No	Indicator	As of the beginning of 2016	As of the end of 2016	Absolute change (+, –)	Growth ratio, %
1	Book value of fixed assets, thousand roubles	2,447,554.8	2,733,514.4	+285,959.6	111.7
	Including: real estate of the establishment	1,209,222.5	1,384,305.1	+175,082.6	1,14.5
	most valuable movable assets	543,093.1	523,986.3	-19,106.8	96.5
2	Depreciation of premises and equipment, thousand roubles	1,083,821.8	1,205,056.8	+121,235.0	111.2
	Including: real estate of the establishment	222,563.4	255,041.5	+32,478.1	114.59
	most valuable movable assets	292,504.3	310,737.3	+18,233.0	106.2
3	Net value of property, plant, and equipment, thousand roubles	1,363,733.0	1,528,457.6	+164,724.6	1,12.1
	Including: real estate of the establishment	986,659.1	1,129,263.6	+142,604.5	114.5
	most valuable movable assets	250,588.8	213,249.0	-37,339.8	85.1
4	Coefficient of depreciation, %	44.3	44.1	-0.2	×
	Including: real estate of the establishment	18.4	18.4	_	×
	most valuable movable assets	53.9	59.3	+5.4	×

A decrease in financial assets in 2016 (of 29.1%), including monetary funds (of 16.6%), primarily due to diverting them to capital expenditures, had a negative impact on the current level of VSU's financial solvency. At the end of the reporting period, the university was able to only discharge 5.6% of its liabilities to the creditors through available funds. Moreover, other active assets (funds expected from the debtors and material assets) are also not enough for the full satisfaction of accounts payable (Table 6.20).



#### Table 6.20

### ANALYSIS OF VSU'S CURRENT FINANCIAL SOLVENCY

<u>'//////</u>				<u>                                     </u>
No	Indicator	As of the beginning of 2016	As of the end 2016 years	Absolute change (+, -)
	I. Initial values for analysis, tho	usand roubles	5	
1	Cash and cash equivalents	23,588.1	19,661.6	-3,926.5
2	Resources in settlements with debtors	26,788.4	16,042.5	-10,745.9
3	Material inventories	22,865.9	28,414.8	+5,548.9
4	Total operating assets (Art. 1 + Art. 2 + Art. 3)	73,242.4	64,118.9	-9,123.5
5	Total liabilities to creditors	362,522.3	370,812.6	+8,290.3
	II. Current solvency ratio	o, coef.		
6	Absolute liquidity ratio (covering liabilities to creditors using monetary funds)	0.223	0.053	-0.17
7	Marginal liquidity ratio (covering liabilities to creditors using monetary funds and resources in settlements with debtors)	0.386	0.096	-0.29
8	Current liquidity ratio (covering liabilities to creditors using operating assets)	0.441	0.173	-0.268

As a result of the increase in accounts payable and a deficit of the University's internal funds, 2016 saw a deterioration in its financial sustainability. During the reporting period, the university became fully dependent on creditors (Table 6.21).

#### Table 6.21

#### ANALYSIS OF VSU'S FINANCIAL STABILITY

<u>'//////</u>			<u> </u>	<u>                                     </u>
No	Indicator	As of the beginning of 2016	As of the end 2016 years	Absolute change (+, –)
	I. Initial values for analysis, tho	usand rouble	s	
1	Liabilities to the creditors	362,522.3	370,812.6	+8290.3
2	Financial results (internal funds)	105,359.5	(34,875.6)	-140,235.1
3	Total value of the sources of financing for the university's activities (excluding liabilities to the founder)	467,881.8	335,937.0	-131,944.8
	II. Financial stability ir	ndex		
4	Equity to total assets ratio (the share of equity capital (financial result) in the total value of sources of financing for university activities)	0.23	(0.10)	-0.33
5	Dependency ratio (share of liabilities in the total value of sources of financing for university activities)	0.77	1.10	+0.33



In the assessment of financial stability, there is a special emphasis on determining the coverage of fixed assets and other non-current assets, which have the greatest percentage in the properties of the university, by long-term sources of financing. Such sources include liabilities to the founder and internal funds in the form of the financial result (from operating activities, accrual of depreciation, and provisions for future liabilities). As of the beginning of 2016, this indicator amounted to 93.5%. At the end of the reporting period, there is an insignificant increase in the shortage of long-term sources of funding (of 0.3 points) due to a more accelerated growth in capital expenditures (Table 6.22).

#### Table 6.22

#### COVERAGE OF THE FIXED ASSETS AND OTHER NON-CURRENT ASSETS BY LONG-TERM SOURCES OF FINANCING

No	Indicator	As of the beginning of 2016	As of the end 2016 years	Absolute change (+, -)
1	Net book value of fixed assets, thousand roubles	1,363,733.0	1,528,457.6	+164,724.6
2	Net value of intangible assets, thousand roubles	4.0	192.2	+188.2
3	Balance value of non-produced assets, thousand roubles	2,902,966.3	2,893,393.6	-9,572.7
4	Investments in the non-financial assets, thousand roubles	85,790.7	58,421.6	-27,369.1
5	Total non-current assets (Art. 1 + Art. 2 + Art. 3 + Art. 4), thousand roubles	4,352,494.0	4,480,465.0	+127,971.0
6	Liabilities to the founder, thousand roubles	4,076,881.4	4,208,646.9	+131,765.5
7	Financial results (internal funds), thousand roubles	105,359.5	(34,875.6)	-140,235.1
8	Total value of the sources of non-current asset formation (Art. 6 + Art. 7), thousand roubles	4,182,240.9	4,173,771.3	-8,469.6
9	Ratio of the coverage of the fixed assets by long-term sources of financing, % (Art. 8 : Art. 5)	93.5	93.2	-0.3

As a result of the growth in the university's total assets (of 3.0%) with a simultaneous 2.5% decrease in revenue (Table 6.23) in 2016, there was a deceleration in asset turnover (not including the non-produced assets – land) by 25 days. Considering the fact that the largest percentage in VSU's property structure is covered by land and property, plant, and equipment, which are long-term assets, the level of the asset turnover remains at an acceptable level (257 days, which is less than a year, and 710 days if land is taken into consideration). The turnover period for the operating assets increased by 8 days, whereas the period of settlements with debtors increased by 4 days.



### Table 6.23

### VSU ASSET TURNOVER ANALYSIS

No	Indicator	2015	2016	Absolute change (+, -)	Growth ratio, %
	I. Initial values for an	alysis, thous	and roubles		
1	Average annual cash balance	55,293.6	21,624.9	-33,668.7	39.1
2	Average annual amount of funds in settlement with debtors (accounts receivable)	44,990.8	21,415.5	-23,575.3	47.6
3	Average annual amount of material assets	22,135.3	25,640.4	+3,505.1	115.8
4	Total average annual amount of operating assets	122,419.7	68,680.8	-53,738.9	56.1
5	Average annual amount of total assets	4,412,900.1	4,544,673.6	+131,773.5	103.0
6	Average annual amount of total assets without non-produced assets	1,523,363.9	1,646,493.7	+123,129.8	108.1
7	Total revenue of the university	2,364,700.8	2,304,525.8	-60,175.0	97.5
	II. Asset turn	over ratio, d	ays		
8	Turnover period for total assets	672	710	+38	105.7
9	Turnover period for total assets without non-produced assets	232	257	+25	110.8
10	Turnover period for operating assets	19	11	-8	57.9
11	Turnover period in settlement with debtors (accounts receivable)	7	3	-4	42.9
12	Turnover period for material assets	4	4	-	100.0



In 2016, the excess of expenditure over revenue led to a negative net operating financial result in the amount of 148,823.8 thousand roubles (Table 6.24). At the same time there was a growth in loss of 105,584.7 thousand roubles or by 3.4 times compared to the previous year. It caused a considerable growth in loss for each rouble of total assets (not including the non-produced assets) from 2.8 to 9.0 kopeks, of fixed assets – from 1.9 to 5.7 kopeks, revenue – from 1.8 to 6.5 kopeks, expenditures – from 1.8 to 6.0 kopeks, and operating assets by 6.1 times.

#### Table 6.24

#### ANALYSIS OF VSU OPERATING PROFITABILITY

No	Indicator	2015	2016	Absolute change (+, –)	Growth ratio, %			
	I. Initial values for analysis, thousand roubles							
1	Average annual amount of total assets (residual value)	4,412,900.1	4,544,673.6	+131,773.5	103.0			
2	Average annual amount of total assets without non-produced assets (residual value)	1,523,363.9	1,646,493.7	+123,129.8	108.1			
3	Average annual amount of current assets	122,419.7	68,680.8	-53,738.9	56.1			
4	Average annual amount of fixed assets (carrying value)	2,288,292.4	2,590,534.6	+302,242.2	126.4			
5	Total revenue	2,364,700.8	2,304,525.8	-60,175.0	97.5			
6	Total expenditures	2,407,939.9	2,464,302.2	+56,362.3	102.3			
7	Net operating financial result (loss)	(43,239.1)	(148,823.8)	+(105,584.7)	344.2 (3.4 times)			
	II. Profitability of	he university	's activities, %	, 9				
8	Profitability of total assets (loss per 1 rouble of total assets) (Art.7 : Art. 1)	(1.0)	(3.3)	+(2.3)	×			
9	Profitability of total assets without non- produced assets (loss per 1 rouble of total assets without non-produced assets) (Art.7 : Art. 2)	(2.8)	(9.0)	+(6.2)	×			
10	Profitability of current assets (loss per 1 rouble of current assets) (Art. 7: Art. 3)	(35.3)	(216.7)	+(181.4)	×			
11	Profitability of fixed assets (loss per 1 rouble of fixed assets) (Art. 7: Art. 4)	(1.9)	(5.7)	+(3.8)	×			
12	Profitability of the university's revenue (loss per 1 rouble of income) (Art. 7 : Art. 5)	(1.8)	(6.5)	+(4.7)	×			
13	Profitability of the university's expenditures (loss per 1 rouble of expenditures) (Art. 7 : Art. 6)	(1.8)	(6.0)	+(4.2)	×			



The main reasons for the weakening of the financial standing of the university in 2016 were as follows:

- An increase in the salaries of academic staff and educational support personnel, and, as a consequence, an increase of 25.0 million roubles in the total payroll budget.
- Incurred costs of 10.6 million roubles due to the construction and commissioning of the swimming pool (extra-budgetary financing).
- The construction and commissioning of the gas boiler station 6.6 million roubles (subsidies) and 4.9 million roubles (extra-budgetary financing).
- Refurbishment of the storage facility for training military equipment 3.7 million roubles (extra-budgetary financing).
- Uneven receipt of the subsidy for the financial support of the execution of the government order for rendering state services from the federal budget.
- Excess of expenditure over revenue 96.0 million roubles.

An important factor to ensure the university's financial solvency was the establishing of the endowment fund in 2013. As of 1 January 2016, the amount of the assets placed under the management of ZAO Gazprombank Asset Management was 17,248 thousand roubles. In the reporting year, it increased considerably by 1,399 thousand roubles (8.1%) and reached 18,647 thousand roubles. The number of contributors reached 140 organizations and individuals (Table 6.25).

#### Table 6.25

### ANALYSIS OF THE RATE OF FORMATION AND CAPITAL PRODUCTIVITY OF THE VSU ENDOWMENT FUND (AS OF 01 JANUARY 2017)

No	Indicator	As of 1 January 2016	As of 1 January 2017	Absolute change (+, –)	Growth ratio, %
1	VSU endowment assets, thousand roubles	17,248	18,647	+1,399	108.1
2	Number of contributors, persons/ companies	135	140	+5	103.7
3	Age of the endowment (as of 1 January of the following year), months	33	45	+12	×
4	Net revenue from the discretionary management of the assets of the Endowment Fund, thousand roubles	2,734	1,565	-1,169	57.2
5	The rate of capital formation, thousand roubles/month (Art. 1: Art. 3)	522.7	414.4	-108.3	79.3
6	Capital productivity, thousand roubles per person (Art. 1: Art. 2)	127.8	133.2	+5.4	104.2
7	Return on the endowment fund capital, % (Art. 4 : Art. 1)	15.9	8.4	-7.5	×

Due to the fact that the bulk of the contributions were made during the first year of the existence of the Endowment Fund, in 2016 there was a reduction in the rate of endowment formation. As a result of a decrease in the market return on contributions from 22.0% in 2015 to 10.5% in 2016 net revenue in the reporting period decreased from 42.8% and reached 1,565 thousand roubles, which led to decrease in return of endowment's assets from 15.9% to 8.4%. At the same time, the capital productivity increased by 5.4%.



## 6.8. DYNAMICS OF THE STAFF REWARD SYSTEM IN 2015-2016

The payroll budget of the university (not including the branches) amounted to:

■ In 2015 – 986,292.9 thousand roubles, including:

From subsidies - 488,173.5 thousand roubles.

From extra-budgetary funds - 498,119.4 thousand roubles.

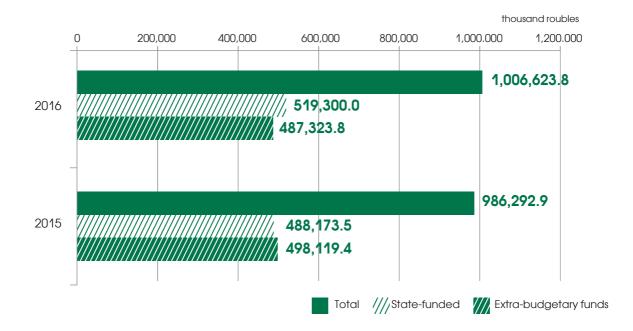
In 2016 – 1,006,623.8 thousand roubles (a growth of 2.1% compared to 2015), including:

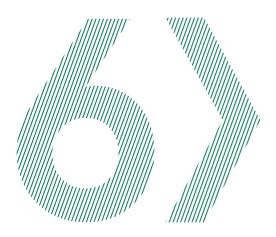
From subsidies - 519,300 thousand roubles (a growth of 6.4% compared to 2015).

From extra-budgetary funds – **487,323.8 thousand roubles** (a decrease of 2.2% compared to 2015) (Figures 6.14 and 6.15).

#### Figure 6.14

#### COMPARATIVE ANALYSIS OF THE PAYROLL BUDGET IN 2015 AND 2016

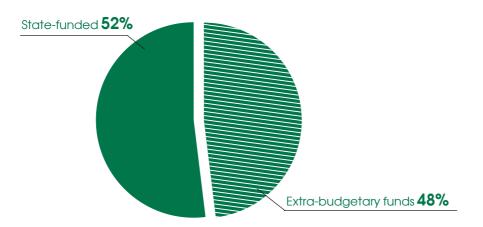




In 2016, there was a growth of 20,330.9 thousand roubles in the payroll budget compared to 2015 (102.2% growth).

#### Figure 6.15

#### PAYROLL BUDGET SRTUCTURE BY THE SOURCE OF FINANCING IN 2016



In 2016, the average salary of University staff members (including extra-budgetary fund payments) amounted to 24,358 roubles. The average salary of academic staff members was 35,963 roubles, researchers – 40,813 thousand roubles, and other employees 13,424 roubles.

Based on the performance in 2016, the staff of the university received bonuses amounting to 1,242.8 thousand roubles.

The bonuses from extra-budgetary funds amounted to 3,899.9 thousand roubles, including:

- 1,782.4 thousand roubles to academic staff members.
- **753.9 thousand roubles** to administrative staff members.
- 1,363.6 thousand roubles to other employees.



## 6.9. MEASURES TAKEN TO RAISE THE SALARIES AND SOCIAL WELFARE OF UNIVERSITY STAFF

Starting from 1 September 2016, in accordance with the social policy implemented by the University the monthly increments were continued:

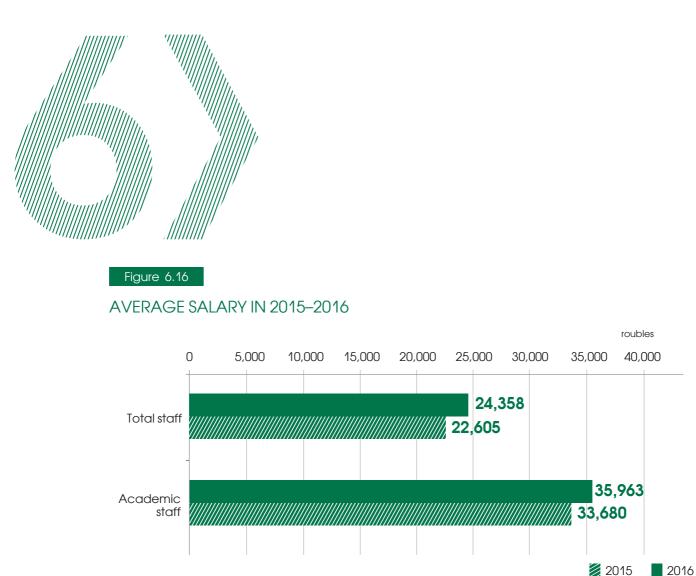
- 30% for regular educational support personnel with VSU as the primary place of employment (including the Faculty of Military Education and the International Education Institute) (Order of the Rector No. 1-2293 dated 27 August 2015).
- 20% for regular educational support personnel at the library with VSU as the primary place of employment (Order of the Rector No. 1-2290 dated 27 August 2015).
- 20% for regular educational support personnel with VSU as the primary place of employment (Order of the Rector No. 1-2292 dated 27 August 2015).
- 20% for regular educational support personnel at Botanical garden with VSU as the primary place of employment (Order of the Rector No. 1-2291 dated 27 August 2015).

### 6.10. ANALYSIS OF AVERAGE SALARIES OF ACADEMIC STAFF MEMBERS AT VSU COMPARED TO AVERAGE SALARIES IN THE VORONEZH REGION

In 2016, the average salary of university staff members (including extra-budgetary fund payments) amounted to 24,358 roubles, including:

- The average salary of academic staff members was 35,963 roubles, which is 150.8% of the average salary in the region and exceeds the target value of the 2016 roadmap, which was 150%.
- The average salary of researchers was 40,813 thousand roubles, which is 171.1% of the average salary in the region and exceeds the target value of the 2016 roadmap, which was 158%.

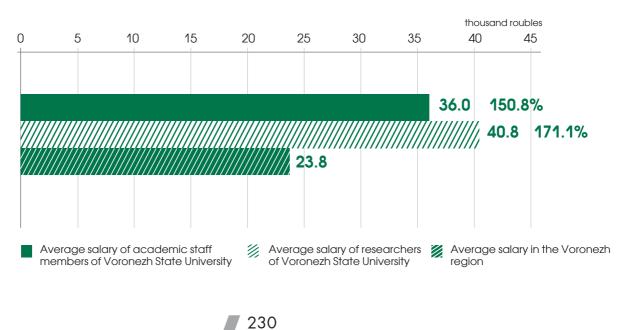




The increase in the average salary of all staff in 2016 was 107.8%, while for academic and teaching staff it amounted to 106.8% (Figure 6.17).

#### Figure 6.17







## 6.11. BRIEF SUMMARY OF THE MAIN ACHIEVEMENTS IN 2016

Following the results of the VSU's financial and operational activities in 2016, all the tasks were carried out in full, in particular:

- The funds received by the VSU budget totalled 2,410,041.9 thousand roubles (100%).
- The ratio of the average salary of VSU teaching staff to the average salary in the Voronezh region was 150.8%.
- The ratio of the average salary of VSU researchers to the average salary in the Voronezh region was 171.1%.
- The monthly increment for educational support personnel at the faculties was maintained at 30%.
- The monthly increment for the operating personnel at the faculties was maintained at 20%.
- The monthly increment for the educational support personnel at the library and Botanical garden was maintained at 20%.

















## INTERNATIONAL ACTIVITIES





**O.N. Belenov,** Head of the Department for International Cooperation

## INTERNATIONAL ACTIVITIES

### 7.1. VSU OBJECTIVES IN THE AREA OF INTERNATIONAL COOPERATION IN 2016

In 2016, VSU's international activities were focused on enhancing the following areas:

- Cooperation with international partner universities aimed at the development of new and the implementation of existing joint programmes, including distance learning programmes.
- Enhancing the university's participation in contests and competitions organized by international organizations, foundations, and programmes in science and education.
- Increasing the number of international students at VSU studying on a fee-paying basis at all levels of higher education; the development of the system of curators for international students.
- Distribution of information about VSU summer/ winter schools among international partners.
- Enhancing academic cooperation with the leading scientists from Europe and the USA.



### 7.2. DEVELOPING COMMUNICATION THROUGH DIRECT CONTRACTS AND AGREEMENTS WITH INTERNATIONAL UNIVERSITIES

VSU has 185 agreements with universities from abroad.

In 2016, Voronezh State University signed 10 agreements with universities from Europe, Asia, and the CIS (Table 7.1).

#### Table 7.1

## LIST OF COOPERATION AGREEMENTS WITH INTERNATIONAL UNIVERSITIES SIGNED IN 2016

No	Country	Programme (project title), university, country	Date	Type of agreement
1	France	Partnership agreement between FSFEI HE VSU and ISC Paris Business School	2016	Academic cooperation and student exchange programmes
2	France	Partnership agreement between FSFEI HE VSU and Chimie ParisTech	2016	Academic cooperation and student exchange programmes
3	Belgium	Partnership agreement between FSFEI HE VSU and Artesis Plantijn University College, Antwerpen	2016	Academic cooperation and student exchange programmes
4	India	Partnership agreement between FSFEI HE VSU and Lingaya's University (New Delhi, Faridabad)	2016	Academic cooperation and student exchange programmes
5	Senegal	Partnership agreement between FSFEl HE VSU and Cheikh Anta Diop University (Dakar)	2016	Academic cooperation
6	Serbia	Partnership agreement between FSFEI HE VSU and the University of Banja Luka	2016	Academic cooperation and student exchange programmes
7	Serbia	Partnership agreement between FSFEI HE VSU and the University of Belgrade	2016	Scientific cooperation
8	Peru	Framework partnership agreement between FSFEI HE VSU and the National University of Trujillo	2016	Scientific cooperation
9	The Republic of Belarus	International partnership agreement between FSFEI HE VSU and Yanka Kupala State University of Grodno	2016	Academic cooperation and student exchange programmes
10	The Republic of Belarus	Scientific partnership agreement between FSFEI HE VSU and Financial and Tax Law Research Institute	2016	Scientific cooperation



In 2016, the "French direction" of VSU's international activity was further developed. In the reporting period, the Department for International Cooperation together with the Regional French Centre held the Campus France days in Voronezh. VSU administrators and students, as well as those from other universities, had a meeting with Igor Sinyatkin, Director of the Campus France information centre of the French Embassy in Russia, who gave a lecture on "How to be successful. Choosing the education pattern. The experience of French universities". He also held workshops which taught how to choose a French university and a speciality to study and how to prepare a good CV and motivation letter.

In February 2016, the French Counsellor of International Economics, the president of the international commission MEDEF, Philippe Verbert, visited VSU. The purpose of the meeting was to sign an agreement between VSU and ISC Paris Business School on establishing and implementing the General Management double degree programme within the Executive MBA professional retraining. Another goal was to meet the Head of Voronezh administration, Aleksandr Gusev, and heads and representatives of such major companies of the Voronezh region as *Angstrem, GK Hamina, Voronezhselmash,* and others.

The international programme aims at improving the professional competence of top managers, teaching them new skills and encouraging further development. The graduates of the programme will get two diplomas: one from VSU and one from ISC Paris Business School. The language of the course is Russian and French. To ensure a high quality of learning experience it was planned to establish International Academic Council that would include representatives of Russian and French education authorities, municipal and regional authorities, and representatives of Russian and French enterprises. Philippe Verbert was elected as the Chair of the Council.

Cooperation with universities from Balkan states became more intense. In the reporting period, two partnership agreements were concluded with Serbian universities: the University of Banja Luka and the University of Belgrade. Both agreements were initiated by the Faculty of Philology of Voronezh State University which students and academic staff have been regularly taking part in academic exchange programmes, internships, and conferences at both universities.



Between 5 and 7 July 2016, the International Projects and Programmes Office of the Department for International Cooperation organised and held the international scientific conference "European Identity and Political Challenges: New Approach and Old Traditions", which became the stepping-stone for a discussion of the European identity phenomenon by experts of the largest universities and research institutes of the EU. The event was organised as a part of the following projects for European programmes: "Political Identity and Political Changes" (Marie Curie Actions of the Seventh Framework Programme) and "ProEU: European Approach for Russia: For and Against" (Jean Monnet Actions of the Erasmus+ programme).

Among the participants of the conference were the leading experts in the area of European studies, international relations, political studies, international law, sociology, and history from major universities and research institutes of the EU: the Catholic University of Leuven (Belgium), the University of Birmingham (Great Britain), the University of Seville (Spain), Institute of Political Studies of Bordeaux (France), Budapest University (Hungary), the National University "Odessa Academy of Law" (Ukraine), National Institute of Economic Studies of the Academy of Sciences of Moldova, and Taras Shevchenko Transnistria State University (Moldova).

Among the participants of the conference were the leading Russian scientists from nearly all regions of the Russian Federation: from Tomsk and Kaliningrad to Saint Petersburg and Simferopol (including Moscow, Perm, Rostov-on-Don, Ivanovo, Krasnodar, Izhevsk, Saransk, and Nizhnevartovsk). The participants also included the heads of subdivisions of the Institute of Europe of the Russian Academy of Sciences, Primakov National Research Institute of World Economy and International Relations of the Russian Academy of Sciences, leading scientists of such universities as Moscow State Institute of International Relations, Saint Petersburg State University, Tomsk State University, Immanuel Kant Baltic Federal University, Southern Federal University, Kuban State University, and others.

As a part of federal target programme of the Ministry of Education and Science of the Russian Federation for 2016-2020 "Russian Language" Voronezh State University in cooperation with Russian Culture and Research Centre, and the German Alumni Association of Voronezh Universities (DAWU) organised and held the German Alumni's Forum "Dialogue between Russia and Germany: University Traditions" in Berlin. The goal of the forum was to create a platform for business, information, cultural and scientific cooperation between Russia and Germany and to improve the image of Voronezh State University and Russian education in Europe.



The programme of the forum included the following events: the round table "International Cooperation in Higher Education: Issues and Prospects", the extended meeting of the German Alumni Association of Voronezh Universities, the exhibition "Voronezh State University in the System of Russian and International education", the photographic exhibition "The Image of Contemporary Voronezh" which had been prepared by the VSU Photography Centre. Moreover, VSU organised special events aimed at promoting the Russian language and culture in Germany: the exhibition by the regional Nikitin literary museum "Literary Traditions of Voronezh", lectures by professors from Voronezh State University, dedicated to contemporary Russian literature in the context of European literary tradition and the role of Germans in the history of the Voronezh region. VSU's folk music group Terem gave two concerts. The university music group presented the folklore of the Voronezh region and performed a number of famous Russian folk songs.

76 people took part in the forum events, including employees of the Embassy of the Russian Federation in Germany, German graduates from VSU and other Russian universities, lecturers, staff and students from Russian and German universities, staff of the Russian Culture and Research Centre and Rossotrudnichestvo in Berlin, representatives of German public organisations, and individuals.

The Forum encouraged the creation of new VSU Alumni Associations. In spring 2016, the Hungarian Alumni Association was created with the assistance of the German Alumni Association and the VSU Alumni Association. In November 2016, the process of creating the VSU British Alumni Association was launched. The events that were held in the framework of the forum attracted a lot of interest from the German public to the Russian language and culture as well as modern techniques of teaching Russian at VSU. Moreover, it was suggested organising a club of connoisseurs of the Russian culture at the Russian Culture and Research Centre (Berlin) by German VSU graduates. Also, a special fund of educational books and journals from VSU was created at the library and the Russian Culture and Research Centre (Berlin).

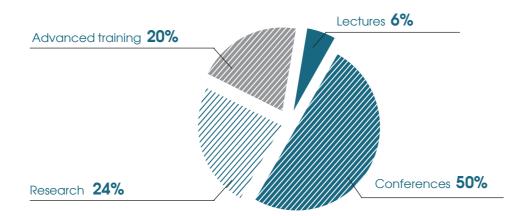
#### ACADEMIC MOBILITY OF VSU STAFF

In the reporting period, about 162 academic staff members of VSU were sent abroad with the purpose of participating in international scientific conferences, performing research, completing advanced training programmes, and giving guest lectures. 81 people were sent abroad on individual invitations to participate in international and national scientific forums, the same number of academic staff members was sent to universities in Spain, Macedonia, Germany, France, Croatia, and Transnistria under agreements between universities (Figure 7.1).



Figure 7.1

NUMBER OF ACADEMIC STAFF MEMBERS SENT ON BUSINESS TRIPS, BY AIMS

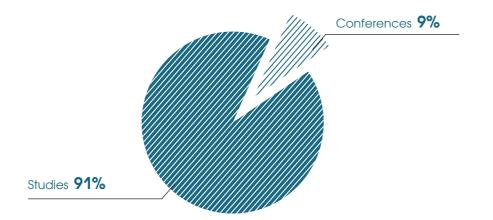


#### DYNAMICS OF ECXHANGE PROGRAMMES COMPLETED BY UNDERGRADUATE AND POSTGRADUATE STUDENTS IN PARTNER UNIVERSITIES

In the reporting period, 110 VSU students completed different types of exchange programmes (one-year, one-term, language courses, internships, pre-graduation practical training) (Figure 7.2).

#### Figure 7.2

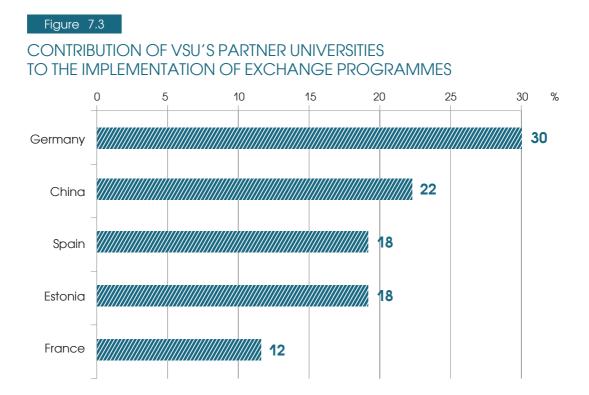




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The most popular countries among the participants of exchange programmes are Germany, China, Estonia, France, and Spain. The keen interest of VSU students in exchange programmes in German and Estonian universities can be explained, not only by he number of places provided by international universities to VSU students, but also by the close contact between researchers and grant offers to our students in partner universities (Figure 7.3).



### 7.3. INFORMATION ABOUT JOINT ACADEMIC (DOUBLE DEGREE) PROGRAMMES IMPLEMENTED AT VSU IN 2016

10 joint academic programmes are currently implemented at VSU. Two new programmes are being actively developed: MBA in collaboration with the ISC Paris Business School (France) and "International Activities and International Negotiations" in partnership with University Lille 1 (France) (Table 7.2).



Table 7.2

#### JOINT EDUCATIONAL PROGRAMMES AT VSU IN 2016

No	Programme	Study option	VSU participating faculty	International partner university	
1	Linguistics. Teaching Italian as a Foreign Language	Master's degree	The Faculty of Romance and Germanic Philology	University for Foreigners of Perugia (Italy)	
2	Tourism Management	Master's degree	The Faculty of International Relations, the Faculty of Romance and Germanic Philology	The University Paris-Est Marne-Ia-Vallйe (Paris, France)	
3	Business in the Emerging Markets	Master's degree	The Faculty of International Relations	FH Joanneum University of Applied Sciences (Graz, Austria)	
4	Contrastive Philology	Master's degree	The Faculty of Romance and Germanic Philology	University of Leon	
5	Business Communication in Economics: German	Master's degree	The Faculty of Romance and Germanic Philology	Martin Luther University (Halle-Wittenberg, Germany)	
6	Russian Literature in the European Context	Master's degree	The Faculty of Philology	The University of Gцttingen (Germany)	
7	Commercial Network Management	Bachelor's degree programme – at VSU master's degree programme – at Lille 3	The Faculty of International Relations	University Lille 1 (France)	
8	Optics and Nanophotonics	Master's degree	The Faculty of Physics	The University of Texas at Brownsville (USA)	
9	Mathematics	Master's degree	The Faculty of Mathematics	The University of Texas at Brownsville (USA)	
10	Tourism Management	Master's degree	The Faculty of International Relations	University of Girona (Spain)	

Apart from the traditional academic staff and student mobility schemes described in agreements for joint academic programmes, partner universities held academic events aimed at the successful implementation of their own programmes and enhancing the quality of education.

In autumn 2016, Voronezh State University held a master's dissertations defence for students of the double degree programme "International Tourism Management" conducted jointly by VSU and the University of Marne-la-Vallée. It was held as a video conference. The programme is one of the most successful and oldest programmes created as a result of cooperation between the universities. It indicates the high level of VSU's academic reputation in the world. The examination commission included representatives from France and Russia. As traditional, the defence was conducted in French and Russian.

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The committee commented on the high level of the dissertations and the importance of the investigated problems that are of interest for both Russia and France. The French colleagues praised the students' high level of proficiency with the French language.

In 2016, the second admission campaign was held for the master's degree programme "Russian Literature in the European Context" implemented in partnership with Georg August University (Guttingen, Germany). 9 of the students are from Russia and 3 are from Germany. The programme was headed by Professor of the Slavonic Studies seminar and the Deputy Dean of the Faculty of Philosophy of the University of Göttingen, Matthias Friese, a researcher at the Slavonic Studies seminar, Marianna Leonova, and Professor and the Head of the Department of Russian Literature of the Faculty of Philology, A.A. Faustov. One of the biggest achievements of the joint programme is the victory in the Erasmus+ competition, Action 1 "Academic Mobility". Thanks to this victory the students and the lecturers from both universities received additional financing to study and read lectures in parter universities between 1 September 2016 and 31 July 2018.

In the reporting period, as a part of the joint master's programme "Business Communication in Economics: the German Language" implemented in partnership with Martin Luther University (Halle, Germany) Professor at Martin Luther University of Halle-Wittenberg, the Dean of the Faculty of Law and Economics, Christoph Weiser, and a lecturer of the same Faculty, Anna Dembo, paid another visit to Voronezh State University. For the second time, they held a business simulation game for students of the Faculty of Economics, the Faculty of International Relations, and the Faculty of Romance and Germanic Philology. The players got a valuable experience of making decisions concerning production plan, price policy, advertising, and recruitment.

In June and September 2016, four Austrian students of the joint programme "Business in the Emerging Markets" defended their dissertations online. Their Russian supervisors were lecturers of the Faculty of International Relations: E.V. Endovitskaya, I.V. Shilova, N.E. Babicheva, and A.I. Lylov. Moreover, in the reporting period, four students of Joanneum University of Applied Sciences (Graz, Austria) successfully completed their programmes and received diplomas of VSU.

In September 2016, the Master's degree programme "International Human Rights Protection" was started at Voronezh State University. The programme is jointly implemented by the Faculty of International Relations and the Faculty of Law of Voronezh State University. It was founded by the consortium of Russian universities and supported by the Office of the United Nations High Commissioner for Human Rights.

The programme is aimed at training highly qualified human rights specialists. It provides students with an opportunity to take part in separate courses in partner universities and do pre-graduate practical training in international universities. The master's students also have a choice of internships in Russia and abroad. The core of the master's programme is comprised of disciplines in international politics and international law.



Between 4 and 8 July 2016, as a part of a project aimed at studying mechanisms of international human rights protection, Voronezh State University hosted the 4th Human Rights summer school "Cooperation between State and Civil Society to Implement International Human Rights Treaties". Among the participant of the summer school were the UN experts, staff of the Office of the United Nations High Commissioner for Human Rights, human rights commissioners, representatives of administrative institutions, professors from the Consortium and the European Inter-University Centre for Human Rights and Democratisation, well-known Russian human rights activists and representatives of non-governmental organisations, over 200 students from 25 universities from 12 regions of the Russian Federation, and invited lecturers from 10 countries. The Director of the Human Rights Council and Treaty Mechanisms Division, Adam Abdelmula, took part in the opening ceremony of the summer school.

The event allowed the exchange of unique experience in human rights protection and to contribute to cooperation between regions. The event was supported by the governor of the Voronezh region, state bodies of legislative, executive, and judicial power, human rights commissioner in the Voronezh region, and law enforcement authorities of the region.

## 7.4. VSU'S PARTICIPATION IN COMPETITIONS FOR INTERNATIONAL FUNDS AND PROGRAMMES

Voronezh State University remains a leader among Russian universities in terms of the number of implemented international projects. Currently, VSU is running **25 projects**:

- Ten Erasmus+ projects within the "Academic Mobility" programme (2014-2020).
- Four Erasmus+ projects within the "Structural Measures" programme.
- Six Erasmus+ projects within Jean Monnet Actions.
- Four Tempus projects.
- One project within the Seventh Framework Programme.

Following the results of a competitive selection of the Erasmus+ programme, VSU received twelve projects in 2016: 2 projects within Programme direction No.2 "Capacity Building in Higher Education" – a former Tempus programme, three Jean Monnet Actions projects, and 7 projects in Programme direction No.1 in Academic Mobility "Projects on Organizing University Students' and Staff's Mobility" (Credit Mobility).





# 7.5. INFORMATION ABOUT INTERNATIONAL STUDENT POPULATION AND DYNAMICS

The work of enrolling foreign residents in study programmes on a free basis (funded from the budget of the Russian Federation) was done in collaboration with Rossotrudnichestvo and the Ministry of Education and Science of the Russian Federation, using the information system for the allocation of quotas for international student admissions, russia-edu.ru, of the Ministry of Education and Science of the Russian Federation.

Following the results of competitive selection, Voronezh State University was granted the right to admit international students on a free basis (funded from the budget of the Russian Federation).

Total number of international students studying at VSU in 2015/2016 was 995. In 2016, there were 158 international students admitted to the VSU Institute of International Education on a state-subsidized and fee-baying basis (Figure 7.4).

#### Figure 7.4

#### INFORMATION ABOUT INTERNATIONAL STUDENT POPULATION AND DYNAMICS IN 2016

					N	umber of people
	0 1	00 2	200 3	00 40	00 50	006 00
Bachelor's degree students						<b>§</b> 504
Master's degree students		/////// <u>/</u> 15	9			
Specialists	30					
Postgraduate students	7	3				
Trainees	///////////////////////////////////////	1				
Pre-university education		/////// 15	8			

The 5th International Student Conference "Student Research as a Resource of Innovative Potential for Development" (Voronezh, the Institute of International Education of Voronezh State University, 18 May 2016) was organized by the VSU International Education Institute in collaboration with the main VSU faculties. Among the participants of the conference were 112 students and 16 lecturers from VSU who chaired sections and were co-authors of reports. 123 reports were given. The participants of the conference included students and cadets of four Voronezh universities (Voronezh State University, Voronezh State University of Engineering Technologies, Voronezh State Medical University, and Zhukovsky and Gagarin Air Force Academy). Students of the Pushkin State Russian Language Institute, Kalmyk State University, and Far Eastern Federal University contributed to the conference with their correspondence. All in all, there were 37 poster presentations.



Among the participants of the conference were representatives of the Russian Federation, CIS states, China, Vietnam, African states, the Middle East countries, Mongolia, Spain, Sri Lanka, Serbia, and Haiti. The results of the conference were published in the electronic proceedings of the conference.

In September 2016, the Institute of International Education in collaboration with the publishing house Zlatoust (Saint Petersburg) (the largest Russian publishing house that specialises on Russian as a foreign language textbooks) implemented a regional scientific workshop for teachers of Russian as a foreign language. 99 teachers of Russian as a foreign language from 15 universities of the Black Earth region took part in the workshop. Among the speakers at the event were the editor in chief of the Zlatoust publishing house, the leading educators of Russian as a foreign language from Saint Petersburg State University (Saint Petersburg), Gubkin Russian State University of Oil and Gas (Moscow), Pushkin State Russian Language Institute (Moscow), and the Institute of International Education of Voronezh State University. The participants were awarded certificates.

In October 2016, the International Research and Methodology Conference "Semantics and Functional Grammar in Linguistics and Linguodidactics" organised by the Institute of International Education's Department of the Russian Language for International Students. Among the participants of the event were 86 specialists from 20 universities of the Russian Federation who specialise in the theory and teaching of grammar of Russian and other languages as foreign languages, and intercultural communication and translation. The participants of the event included representatives from the Republic Belarus, Hungary, and Spain.

In December 2016, the Institute of International Education of Voronezh State University took part in the implementation of the grant of the Ministry of Education and Science of the Russian Federation "Russian Language". The grant was used to implement VSU's international educational project at Shandong University (Jinan, China) "Russian Language – Territory of Education". The project included exhibitions that presented Russian system of higher education. It also allowed presenting cooperation opportunities for Voronezh State University and Shandong University aimed at satisfying the demand among Chinese citizens in higher education programmes in the Russian language in various areas.

A research and methodology conference was held for teachers of Russian as a foreign language from Chinese universities, Russian lecturers teaching the Russian language in China, and students from partner universities from Russia and China. A demonstration of distant learning with Russian language lessons was held at VSU for Chinese students.

The interactive training system of the Institute of International Education of Voronezh State University "Russian Virtual Class" was presented, as well as a linguistic and communication distance course in Russian as a foreign language "Let's speak Russian".

In 2016, as a part of the federal target programme of the Ministry of Education and Science of the Russian Federation "Russian Language" the academic staff of the Institute of International Education headed by the Head of the Department of Sciences of the Institute of International Education, I.P. Rodionova, developed the content for six (out of nine included in the curriculum by the Ministry of Education and Science of the Russian Federation) distant learning electronic courses. The courses were developed for the national project "Electronic Pre-university Faculty" that can be found on the federal portal "Education in Russian".

In 2016, academic staff of the Institute of International Education developed and published in Russia and China 16 text books in the Russian language for foreign students of different levels.





## 7.6. BRIEF SUMMARY OF THE MAIN ACHIEVEMENTS IN 2016

1. Ten joint education programmes were implemented in collaboration with partner universities, and another two programmes were developed in collaboration with international partners.

25 international projects financed by European foundations and programmes in the area of education and science were implemented, including 12 new projects of the Erasmus+ programme supported by the European Commission: seven projects in programme direction No.1 in Academic Mobility "Projects on Organizing University Students' and Staff's Mobility" (Credit Mobility), two projects in programme direction No.2 "Capacity Building in Higher Education" – a former Tempus programme, and three Jean Monnet Actions projects.

- 2. Two projects were implemented as a part of grants of the Ministry of Education and Science of the Russian Federation for 2016-2020 "Russian Language": The German Alumni's Forum "Dialogue between Russia and Germany: University Traditions" in the Russian Culture and Research Centre in Berlin (Germany) and VSU's international educational project "Russian Language – Territory of Education" at Shandong University (Jinan, China). The interactive training system of the Institute of International Education of Voronezh State University "Russian Virtual Class" was presented, as well as a linguistic and communication distance course in Russian as a foreign language "Let's speak Russian".
- 3. The number of international students is now 995.
- 4. Five programmes for summer schools for international students were developed on the following topics: "Topological Methods of Analysis", environmental summer school "Natural Resources of Central Russian Upland and their Protection", "Russian Regional Studies: History, Studies, and Economics", and IT summer school developed for Lingaya's University (New Delhi, Faridabad).
- 5. A student mobility programme fair was organised. It was attended by over 400 students.

- 6. The international scientific conference "European Identity and Political Challenges: New Approach and Old Traditions" was held. Among its participants were the leading experts of the largest universities and research institutes of the EU.
- 7. The master's degree programme "International Human Rights Protection" was started. The programme is jointly implemented by the Faculty of International Relations and the Faculty of Law of Voronezh State University. It was founded by the consortium of Russian universities and supported by the Office of the United Nations High Commissioner for Human Rights.
- 8. The 4th international human rights summer school "Cooperation between State and Civil Society to Implement International Human Rights Treaties" was held.
- 9. The 5th international student conference "Student Research as a Resource of Innovative Potential for Development" (Voronezh, the Institute of International Education of Voronezh State University, 18 May 2016) was held. Among the participants of the conference were representatives of the Russian Federation, CIS states, China, Vietnam, African states, the Middle East countries, Mongolia, Spain, Sri Lanka, Serbia, and Haiti.
- 10. A regional scientific workshop for teachers of Russian as a foreign language was held. 99 teachers of Russian as a foreign language from 15 universities of the Black Earth region took part in the workshop. The event will be held annually and will offer advanced training opportunities for teachers of Russian as a foreign language of the region.
- 11. The content for six (out of nine included in the curriculum by the Ministry of Education and Science of the Russian Federation) distant learning electronic courses was developed for the national project "Electronic Pre-university Faculty" that can be found on the federal portal "Education in Russian".
- 12. 16 text books in the Russian language for foreign students of different levels were developed and published in Russia and China.

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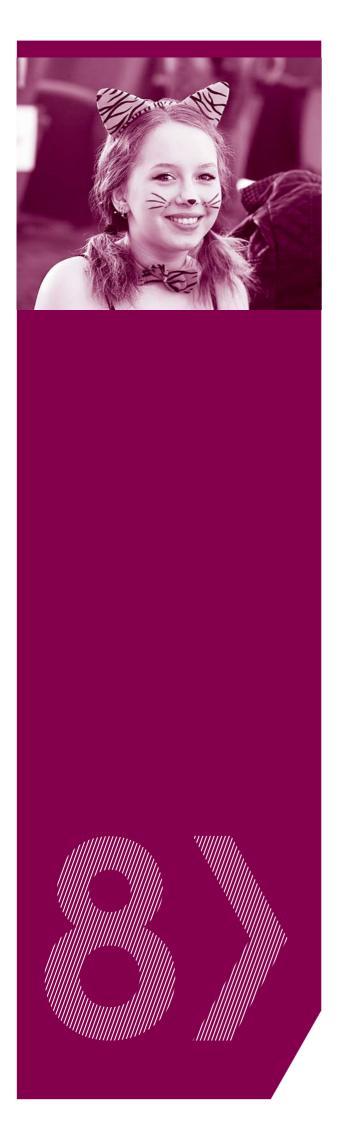












## STUDENT AFFAIRS AND SOCIAL DEVELOPMENT



## STUDENT AFFAIRS AND SOCIAL DEVELOPMENT



**O.V. Grishaev,** Vice-Rector for Student Affairs and Social Development

### 8.1. MAIN OBJECTIVES IN THE FIELD OF STUDENT AFFAIRS AND SOCIAL DEVELOPMENT IN 2016

The objectives in the field of student affairs and social development for 2016 were stated in the August reports of the Rector. They include:

- To continue interactions with the heads of the national diasporas of the Voronezh region to develop tolerance among students and to stop extremism and incitement of ethnic hatred.
- To update regulatory environment for the University Dormitory Complex Administration, to create transparent accommodation mechanisms, and to enhance the control of compliance with campus policies.
- To develop a modernisation programme for the infrastructure and the sanitation environment at the "Venevitinovo" recreation facility.
- To further develop student councils and to start collaboration with the student ombudsman.
- To increase the number of events held by the Leisure and Culture Centre at the VSU concert hall and to develop the mechanism of internal financing of these activities.
- To organise quarterly cultural and sport events for both VSU staff and students (university competitions, festivals, celebrations, including those held at the VSU swimming pool).



## 8.2. ORGANISATION OF SUMMER HOLIDAYS

The Department for Social Development ensured the organisation of summer holidays and recreation for University staff members and students at the Venevitinovo sport and fitness complex and the Black Sea coast (Sochi and the Republic of Crimea).

All in all, in summer 2016, 690 people went on holiday to the Venevitinovo recreation facility, including 353 VSU employees and members of their families, 26 retired VSU employees, 76 children of the VSU employees, 60 outsiders who paid the full price, and 175 students.

In summer 2016, 700 students went on holiday to the Black Sea coast (Figures 8.1–8.4).

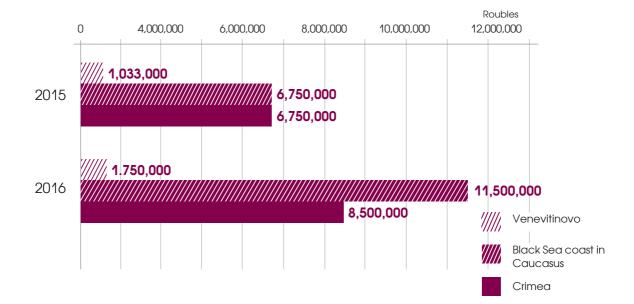
#### Figure 8.1



## ORGANISATION OF SUMMER HOLIDAYS FOR STUDENTS

Figure 8.2

MONEY SPENT ON THE ORGANISATION OF SUMMER HOLIDAYS FOR STUDENTS



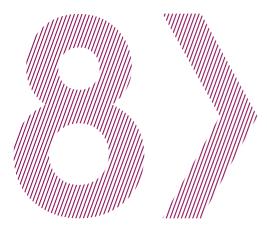
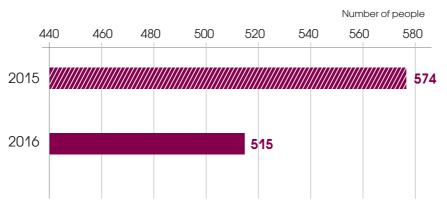


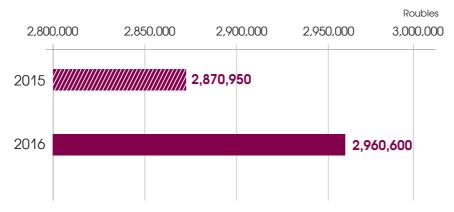
Figure 8.3

#### ORGANISATION OF SUMMER HOLIDAYS FOR UNIVERSITY EMPLOYEES AT THE VENEVITINOVO SPORT AND FITNESS COMPLEX



#### Figure 8.4

MONEY SPENT ON THE ORGANISATION OF SUMMER HOLIDAYS FOR UNIVERSITY EMPLOYEES AT THE VENEVITINOVO SPORT AND FITNESS COMPLEX

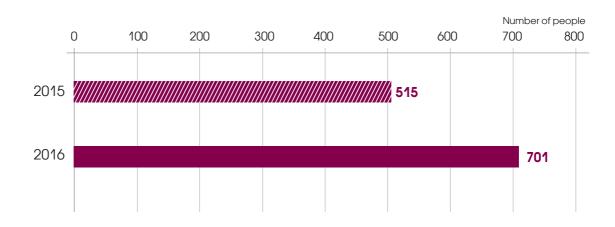


In 2016, the road to the Venevitinovo sport and fitness complex was repaired, and the fence around the complex was extended, some of the houses and amenity buildings were refurbished, the children's playground was fitted with extra equipment, the sauna was refurbished, and the boathouse and a hard-surface parking lot were developed.



## 8.3. FINANCIAL AID

In 2016, on the ground of the Statute on Terms and Conditions of Rendering Financial Aid to the Employees of Voronezh State University and the Statute on Social Support for the Single Retired Employees of Voronezh State University 701 current and retired VSU employees received financial aid which amounted to 3,947,150 roubles (see Figures 8.5 and 8.6).

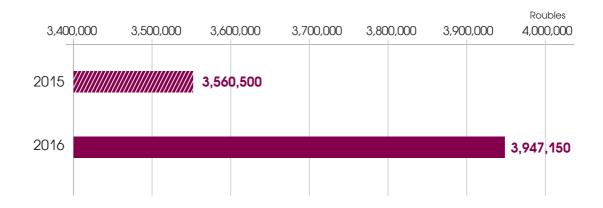


## FINANCIAL AID TO EMPLOYEES

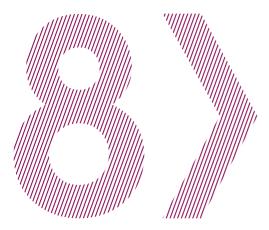
Figure 8.6

Figure 8.5

#### MONEY SPENT ON FINANCIAL AID TO EMPLOYEES



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In 2016, the amount of money spent on the financial aid to students totalled 60,609,500 roubles. The aid was rendered to 11,953 people (see Figures 8.7 and 8.8).

## Figure 8.7 FINANCIAL AID TO STUDENTS

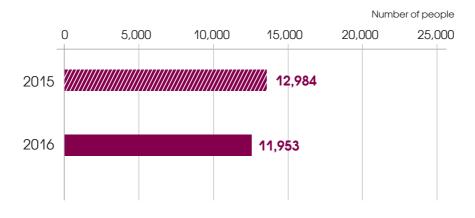
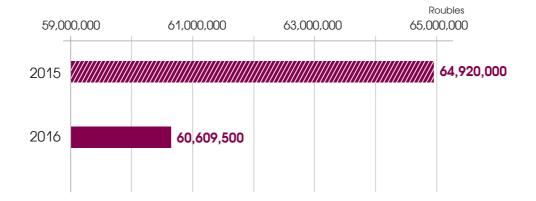


Figure 8.8

#### MONEY SPENT ON FINANCIAL AID TO STUDENTS



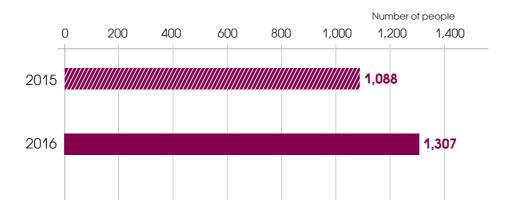


## **8.4. BURSARIES**

In 2016, the sum of bursaries paid to students totalled 37,724,782 roubles (see Figures 8.9 and 8.10).

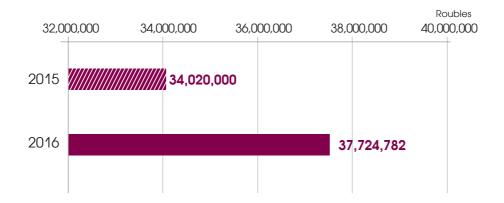
#### Figure 8.9

#### NUMBER OF STUDENTS WHO RECEIVED BURSARIES



#### Figure 8.10

#### MONEY SPENT ON BURSARIES





## **8.5. INTERACTION WITH THE VSU TRADE UNION**

- In 2016, a permanent joint negotiation committee registered and analysed all incoming suggestions regarding changes to the Collective Contract. Approved additions and changes to the Collective Contract were negotiated and recommended by the committee to be signed by the parties (Annex No 1 to the Regulations on the Compensations and Benefits to the Employees of Voronezh State University and Annex No 10 to the List of Positions Entitling Employees to Additional Paid Leave for a Non-Standard Work Day were revised).
- 2. A joint social committee regularly made decisions on the grounded rendering of financial aid to employees and partial reimbursement for health resort treatment expenses on a regular basis. During holiday period, 19 employees received health resort treatment in the amount of 613,483 roubles. 39 more applications for the reimbursement of expenses will be considered by the joint committee of the VSU administration and VSU representative body in the current period. In 2016, on the ground of the Regulations on Terms and Conditions of Rendering Financial Aid to the Employees of Voronezh State University and the Regulations on Social Support of the Single Retired VSU Employees 701 current and retired University employees received financial aid which amounted to 3,947,150 roubles.
- 3. In 2016, in accordance with the Collective Contract, Clause 5.8.2, the committee repeatedly solicited the Rector for increased non-recurrent severance payments to the oldest retiring University employees (23 people received fivefold severance payments upon request).
- 4. The Trade Union, together with the Department of Health and Safety, regularly monitored the working conditions of employees. Joint committees visited the employees' workplaces on a regular basis. VSU formulated and implemented consensual proposals to increase the number of perquisites for university employees whose working conditions are not normal (in 2016, 97 people were paid compensatory incentive increments in the amount of 12% above the official monthly salary and 92 people were paid increments in the amount of 24%). 398,350 roubles was spent on regular occupational health examination of employees.
- 5. Collaborative analysis of the academic staff teaching load allowed establishing a differentiated load for different categories of the academic staff in 2016/2017.
- 6. The Leader of the Year expert committees on internal grants that included the Trade Union representatives worked regularly and efficiently and chose winners in all nominations.



- 7. For many years DSASD together with the Trade Union have been providing assistance to pensioners who are alone. In the reporting period, in accordance with the Order of the Rector, 50 pensioners who have no relatives received material incentives on the International Day of Older Persons. The university provided refurbishment works for the pensioners in desperate need and helped them in difficult situations including financial aid and legal assistance.
- 8. The Trade Union in collaboration with the Department for Student Affairs and Social Development developed grounded proposals for pricing holiday packages to the Venevitinovo recreation facility in 2016 and establishing the system of perquisites for University employees, their children of pre-school and school age, other members of their families, and VSU retired employees. The work of the Venevitinovo complex was regularly monitored throughout the holiday season:
  - A joint committee visited the recreation facility at various times before the start of the holiday season in order to draw up a list of urgent works to prepare the facility for the opening.
  - During the summer holidays the committee regularly visited the site to examine the recreation conditions for employees and immediately eliminated any problems.

All in all, during the season of 5 12-day periods, 515 people went on holiday to the Venevitinovo recreation facility, including 353 VSU employees and members of their families, 26 retired VSU employees, 76 children of the VSU employees, and 60 outsiders who paid the full price.

9. A long-standing joint programme which enables university employees and students to attend classical music concerts of the Voronezh Academic Symphony Orchestra and Voronezh Youth Symphony Orchestra held at the Philharmonic Hall and the University Hall respectively was prolonged. Twice a year, up to 100 VSU employees and retired employees and 80 students buy season tickets at reduced prices (annual expenses for the project amounted to 730,000 roubles). In September and May 2016, now traditional concerts of the Voronezh Academic Symphony Orchestra and Voronezh Youth Symphony Orchestra took place in the University Hall. Thanks to the active interaction with these symphony orchestras our employees can get free invitations to visit additional concerts.





- 10. The celebration of the 71st Victory Day anniversary was thoroughly prepared for in collaboration between the University administration and the Trade Union. The traditional University celebration that was held in the honour of the veterans was particularly warm and heartfelt. The meeting which started the celebration was attended by a great number of VSU employees and students. During the Victory Day celebration, war songs were played, the veterans had a chance to talk to each other and to the Rector and employees of the university who gave them a warm welcome. Victory Day was celebrated at VSU on a high patriotic note. The veterans received presents from the university and souvenirs from the members of a historical reconstruction club. The Administration and the Trade Union continued to implement the programme of day-off trips in compliance with which the university renders transport for excursions organised by the Trade Union of Employees. In 2016, University employees visited the birthplace of the composer S.V. Rakhmanin in the village of Ivanovka in the Tambov region, the Palace of Oldenburg in Ramon, the Archaeological Museum in the village of Kostenki in the Voronezh region, and Divnogorie.
- 11. The university administration not only contributes to the recreation of its employees but also assists in organising health check-ups. In 2016, the university continued to organise health check-ups and treatment of university employees in compliance with the agreement between VSU and Voronezh healthcare institutions, i.e. medical treatment contracts with clinical hospital No 17 and Russian Railways' clinical hospital were renewed.

In 2016, in compliance with the contract between VSU and the Road clinical hospital for consulting and examination services (diagnostic sonography, biochemical studies, diagnostics, etc.) 28 employees had health check-ups worth a total of 100,855 roubles.



## 8.6. PROGRESS REPORT ON THE GRANT OF THE MINISTRY OF EDUCATION AND SCIENCE OF THE RUSSIAN FEDERATION FOR STUDENT COMMUNITIES DEVELOPMENT

In 2016, the Programme for Student Communities Development included 10 events in the following areas: "Culture and Creativity", "Student Sport and Healthy Lifestyle", and "Intercultural Dialogue". All the planned events were fully implemented, all the performance targets were fully achieved (Table 8.1).

#### Table 8.1

#### INFORMATION ABOUT IMPLEMENTATION OF THE PROGRAMME FOR STUDENT COMMUNITIES DEVELOPMENT FOR 2016

Event	Status	Numbers of participants	Dates				
CULTURE A	ND CREATIVITY						
VSU SCHOOL FOR STUDENT ACTIVISTS	University	250	21–29 August				
Participation in the national festival "All-Russian Student Marathon"	National	50	3–7 February				
Festival of student teams from the universities of the Central Federal District	Regional	300	5–7 April				
National student forum "Home cities"	National	150	19–22 November				
SPORTS AND A		'LE					
The 5th tourism meeting "Tourist's Basic Training"	Regional	50	19–20 September				
The first open bumper ball championship of Voronezh State University	University	180	5 December				
Open short distance sports tourism championship of Voronezh State University	Regional	48	25–26 September				
Regional hockey championship between amateur teams from the universities of the Voronezh region	Between universities	150	15 February				
INTERCULTURAL DIALOGUE							
International youth educational festival and camp "Days of the CIS Youth"	International	300	14–15 November				

Following the results of the implemented programme it may be said that students have a lot of interest in the events of the programme. In 2016, the number of events was much lower compared to the previous years, which allowed holding each of them to a higher standard. In the previous years, the Joint Students' Board formed wellestablished and consistent student communities, which allowed them to year on year win grant competitions for the implementation of the programme, to hold events, and to successfully report on them.



## 8.7. BRIEF OVERVIEW OF THE CONTESTS: "FIRST-YEAR STUDENT", "STUDENTS' SPRING", "WHAT? WHERE? WHEN?", AND "STUDENT MARATHON"

The Students' Spring contest is traditionally held in late March – early April and is now not only a platform for students' creativity but also for the selection of best performances for the contest of the regional ("Regional Spring – Youth Creativity") and the national ("Russian Students' Spring") levels (Table 8.2).

#### Table 8.2

Place	Faculty						
The Premier League							
1st place	The Faculty of Applied Mathematics, Informatics, and Mechanics						
2nd place	The Faculty of Romance and Germanic Philology						
3rd place	The Faculty Of Geology						
4th place	The Faculty of Computer Sciences						
5th place	The Faculty of Physics						
6th place	The Faculty of Mathematics						
7th place	The Faculty of Law						
	The First League						
1st place	The Faculty of History						
2nd place	The Faculty of Economics						
3rd place	The Faculty of Philology						
4th place	The Faculty of Geography, Geoecology, and Tourism						
5th place	The Faculty of Journalism						
6th place	The Faculty of Chemistry						
7th place	The Faculty of Philosophy and Psychology						
8th place	The Faculty of International Relations						
9th place	The Faculty Of Pharmaceutics						
10th place	The Faculty of Biomedical Sciences						

## RESULTS OF THE STUDENTS' SPRING FESTIVAL – 2016



Following the results of the university festival some of the performers took part in the Regional Spring – Youth Creativity festival. Based on the results, VSU students received awards in the following nominations: "Best Solo Dance", "Best Small-Scale Dance Work", and "Best Mass Dance". The winners represented their university and the region at the Russian Students' Spring festival where they received similar awards and a special prize for the best pantomime.

The First-Year Student contest is aimed at promoting creativity among students who just entered the university, involving them in the university's cultural life, developing their creativity, and helping them to adapt to the new environment. In 2016, the festival took place in November. The final places are shown in Table 8.3.

#### Table 8.3

#### THE FIRST-YEAR STUDENT – 2016 CONTEST RESULTS

Place	Faculty
1st place	The Faculty of Journalism
2nd place	The Faculty of Computer Sciences
3rd place	The Faculty of Physics
4th place	The Faculty of Applied Mathematics, Informatics, and Mechanics
5th place	The Faculty of Economics
6th place	The Faculty of History
7th place	The Faculty of Geography, Geoecology, and Tourism
8th place	The Faculty of Philosophy and Psychology
9th place	The Faculty Of Pharmaceutics
10th place	The Faculty of Law
11th place	The Faculty of Biomedical Sciences
12th place	The Faculty Of Geology
13th place	The Faculty of Romance and Germanic Philology
14th place	The Faculty of Chemistry
15th place	The Faculty of Mathematics
16th place	The Faculty of International Relations
17th place	The Faculty of Philology



## INFORMATION ABOUT ORGANIZATION AND POPULARAZATION OF INTELLECTUAL GAMES AND INTELLECTUAL LEISURE

From the very beginning of the work with the grant of the Ministry of Education and Science of the Russian Federation, the Joint Students' Board of VSU set the goal to make VSU one of the most prominent centres for intellectual games. Every year, regional and international championships are held in VSU. The information about events in the area of intellectual leisure development that were held in VSU in 2016 is shown in Table 8.4.

#### Table 8.4

## INFORMATION ABOUT INTALLECTUAL CHAMPIONSHIPS HELD IN 2016

Name	Status	Dates	Numbers of participants
Spring games of the VSU championship (4 stages)	University	15 February – 16 May	180
Russian Championships in "What? Where? When?"	National	8-9 May	450
Voronezh Intellect Challenge	International	24–25 September	100
4th Open Cup of the Black Earth region in intellectual games	International	1–2 October	100
Autumn games of the VSU championship (3 stages)	University	23 September – 18 December	165

## YOUTH FESTIVAL "ALL-RUSSIAN STUDENT MARATHON"

The All-Russian Youth Marathon festival has been held since 2012 and the VSU team has traditionally taken part in it. In 2012, the VSU team "Doctor of Sciences, Professor Shvarzengold" took 1st team prize. Then it did not take part in the marathon for 2 years but returned with a triumph in 2015 when they took 1st place again.

In 2016, the VSU team went to the All-Russian Youth Marathon to repeat their previous year's success. Students from 16 Russian regions took part in the event. The total number of participants amounted to 450. Based on the results of the event, VSU students were awarded with the following prizes:

- 1st place in the gorodki tournament
- 1st place in the volleyball tournament
- 3rd place in the indoor soccer tournament
- 1st place in the signing contest
- 1st place in the intellectual contest "What? Where? When?"
- 2nd place in the dancing contest
- 2nd place in the style and make-up contest
- 2nd place in the contest "KVN" (the Club of the Cheerful and Sharp-Witted)
- 3rd place in the drama contest

Results: 1st place in the sport programme, 2nd place in the creativity programme, and 1st place in the overall competition.



## 8.8. SPORTS AND A HEALTHY LIFESTYLE

Physical culture and sport is an effective way to develop your physical fitness, improve your health, to communicate with other people, and to be socially active. Moreover, without a doubt they also influence other aspects of student life: their image and status in the society, work, intellectual and ethical characteristics, ethical ideals, and values.

Physical education at VSU has some peculiarities due to a great number of students. Annually, about 10 thousand students study physical education, which is an obligatory subject at VSU.

Many VSU students do various sports, achieve outstanding results in them, and have sport categories and titles. For example, in 2016, 166 athletes with considerable achievements in sport entered the university: 3rd category – 28 students, 2nd category – 62 students, and 1st category – 56 students. Among them there are 38 candidate masters of sports, 3 masters of sport of Russia, and 1 international class master of sport.

The Department of Physical Education and Sports has sport clubs for 28 kinds of sport that are included in the programme of the Universiade between universities of the Voronezh region. Moreover, the university has sport clubs for sports which are not included in the programme of the Universiade: rhythmic gymnastics, shaping, aerobics, tourism, wushu, lawn tennis, military hand-to-hand combat, aikido, and rugby-7.

It should be noted that sport clubs for such kinds of sport as rugby-7 and military handto-hand combat are unique within the Voronezh region and can only be found at VSU.

All in all, 630 students are members of sport clubs: 220 women and 410 men.

650 VSU students have sport categories and titles: 3rd category – 96 students, 2nd category – 181 students, and 1st category – 211 students. Among them there are 139 candidate masters of sports, 22 masters of sport of Russia, and 1 international class master of sport.

VSU students regularly represent the university at national tournaments, such as "Russian Ski Track" and "Nation's Cross-country Race". They are prize-winners of the national student games "Ready for Labour and Defence" which is held among university students of the Voronezh region.

The sport club at the Department of Student Affairs holds many sport competitions every year. One of the key sport result markers for each faculty is the Spartakiade between faculties. In the reporting period, the Spartakiade was held in 13 sports and the number of its participants exceeded 1,200 people. The results of the Spartakiade are shown in Table 8.5.

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#### **VSU SPARTAKIADE RESULTS**

	<u>         </u>			<u>        </u>				<u>        </u>	<u>                                     </u>	<u>       </u>	<u>       </u>	<u>                                     </u>		<u>       </u>	<u>                                     </u>
Sport Faculty	Basketball (men)	Basketball (women)	Volleyball (men)	Volleyball (women)	Badminton	Chess	Kettlebell lifting	Armwrestling	Table tennis	Bench press	Indoor soccer	Cross country running (men)	Cross country running (women)	Points	Place
The Faculty of Applied Mathematics, Informatics, and Mechanics	1	4	1	8	1	2	1	1	3	1	2	1	1	156	1
The Faculty of Law	3	2	2	3	2	3	3	2	2	2	13	5	3	138	2
The Faculty of Mathematics	4	5	8	2	4	1	6	5	8	4	9	4	10	113	3
The Faculty of Economics	5	1	5	6	9	-	-	3	1	6	1	3	4	105	4
The Faculty of Physics	2	6	6	15	5	5	4	4	5	3	4	-	7	102	5
The Faculty of Computer Sciences	7	-	3	13	-	6	2	7	7	-	3	6	14	80	6
The Faculty of Chemistry	-	-	11	1	6	4	-	-	6	7	17	7	9	73	7
The Faculty of Biomedical Sciences	9	10	7	11	8	7	8	-	11	-	10	9	8	67	8
The Faculty of Pharmaceutics	-	7	10	5	-	9	5	-	14	-	15	10	2	63	9
The Faculty of Romance and Germanic Philology	-	-	9	4	12	8	8	_	9	9	7	11	13	63	10
The Faculty of Geography, Geoecology, and Tourism	-	-	12	7	7	-	-	-	16	5	6	2	6	58	11
The Faculty of History	10	3	4	10	-	11	-	-	13	-	8	8	16	56	12
The Faculty of Philosophy and Psychology	6	9	17	9	11	10	11	6	10	-	14	12	11		13
The Faculty of Geology	-	-	16	17	3	-	-	-	4	-	5	-	17		14
The Faculty of Journalism	8	8	14	12	-	-	-	-	12	-	12	13	12		15
The Faculty of Philology	-	-	13	16	13	-	7	-	15	-	16	-	5		16
The Faculty of International Relations	-	-	15	14	10	-	10	_	17	8	11	14	15		17
Numbers of participants	123	107	153	126	52/39	48/20	40	37	51/34	40	210	84	102		1266

Apart from sport competitions at VSU, VSU students took part in the Voronezh Universiade. In 2016, the VSU team took part in all 26 sports included in the programme, earned 152 points, and took 2nd place. First place was taken by the team from Voronezh State University of Architecture and Civil Engineering University who earned 163 points in 26 kinds of sport. Voronezh State Technical University team was third with 111 points in 23 kinds of sport.

The VSU team lost 11 points to the team from Voronezh State University of Architecture and Civil Engineering and won the silver medals again. The bronze medal winner, the team from Voronezh State Technical University, lost 41 points to VSU. It should be mentioned that the team from Voronezh State Institute of Physical Training who have never failed to be among the prize-winners did not take part in the Universidae in the 2015/2016 academic year.

In 2016, the VSU team took 20 prize-winning places in the Universiade among universities of the Voronezh region: 6 first places, 11 second places, and 3 third places.



## 8.9. BRIEF OVERVIEW OF THE EVENTS HELD TO DEVELOP PATRIOTISM AND CIVIC POSITION

#### 25 January

Laying flowers at the Pobeda square to commemorate the Day of Voronezh Liberation from Nazi Invaders

#### 1-25 February

The patriotic action "Snow landing forces" aimed at fostering patriotism among the youth, providing help to the Voronezh region citizens, raising the spirits of the people from the countryside, and developing business connections with the administrations of the districts (the Ramon and Povorinsk municipal districts of the Voronezh Region)

#### 23 February

Laying flowers and wreaths in front of the Tomb of an Unknown Soldier (Pobeda square), laying flowers in front of the Monument of Glory

#### 12 March

The Green forest event (Kozhevenny Kordon)

#### 17 March

The "Clean City - Clean Mind" event

#### 18 March

A concert and a meeting "We are Together" (Moscow, Vasilievsky spusk)

#### 3 April

A clean-up at the "Friends" vet centre for homeless animals

#### 5 April

Participation in a special operation organised by the Main Department of Internal Affairs and student teams (Voronezh Region)

#### 10 April

Participation in a volunteer clean-up in the territory of the princess Oldenburgskaya's land (Ramon District)

#### 16 April

A volunteer clean-up in the Dinamo central park

#### 17 April

A volunteer clean-up in the Ramon district

#### 23 April

A volunteer clean-up together with the governor Alexei Gordeyev (the Dinamo central park/the Nemetskaya Sloboda)

#### 1 May

Policing in Voronezh

#### 9 May

The Immortal Regiment event (about 200 people)

#### 13 May

A volunteer clean-up in the Student teams' lane in the Voronezh region

#### 1 June

The social event "International Children's Day" in a welfare shelter in Voronezh

#### 12 June

Day of Russia celebration



#### 10 September

A volunteer clean-up in the territory of Gorky sanatorium

#### 22 June

The event "Candle of memory" (Pobeda square)

#### 20 July

Participation in the national event "Day of High-Powered Work" (Moscow)

#### 14 and 15 December

VSU organised an international sport festival "Together We are Stronger", aimed at promoting tolerance and strengthening international and inter-ethnic relations in the student community. The event had two stages. The first stage included swimming competitions in the VSU swimming pool which was opened by the VSU Rector and the leaders of VSU foreign students' communities. On the second day, there was an indoor football tournament and a friendship match between the Rector's office team and the team of the National Chamber under the aegis of the governor of the Voronezh region.

# 8.10. BRIEF OVERVIEW OF THE STUDENT FESTIVALS, CONCERTS, CAMPAIGNES, AND CHARITY EVENTS

- On 25 January, our university celebrated two important holidays the Day of Voronezh Liberation from Nazi Invaders and the Russian Students Day. VSU students and staff gathered at the memorial dedicated to the university staff and students who died in the Great Patriotic War. The university administration informally congratulated the students who gathered in the hall of the main university building. The students were treated with a traditional dessert and music by the cover band Cover Brothers.
- On 19 February, VSU students and staff celebrated the Defenders of the Fatherland day. A concert by artistic groups from Voronezh was held.
- On 1 March, staff, lecturers, and students of Voronezh State University celebrated Maslenitsa festival. The sparkling performance of VSU folk music group Terem and a VSU folk music group Lel created a carnival atmosphere. The visitors could take part in traditional circle dancing, sing songs of their childhood, and try the traditional food – pancakes with sour cream and jam.
- On 20 January, a concert was held at Voronezh regional philharmonic hall as a part of the "Siyai Zvezda" (Twinkle, Star!) festival with the University Chorus being one of the participants.
- The VSU folk music group Terem supervised by the art director of the Leisure and Culture Department, G.M. Khristova:
  - Held a Christmas festival for pupils of the Semiluki orphan boarding school.
     The meetings between the folk music group and the children of the orphan boarding school at Christmas have become a good five year old tradition.
  - Took part in the 18th regional youth folk festival of traditional Slavic culture "On Trinity Sunday" that was held in Novaya Usman in the Voronezh region.



- Took part in the 4th international folk festival "Desnynsky round dance", which took place in the Bryansk region and Bryansk.
- Took part in a folk art festival, which took place in the settlement Bolshebykovo in the Krasnogvardeisky district of the Belgorod region.
- Took part in a big folk and ethnographic festival "At Our Lady of Kazan Day" that was held on 4 November at the National Unity Day.
- On 15 March, as a part of an inclusive cultural project, "Theatre of Equals", which actors are young people with disabilities, presented their play "Empty souls" in the VSU concert hall.
- Voronezh State University together with the Voronezh philharmonic hall with the support the Ministry of Culture of the Russian Federation, the Department of Culture of the Voronezh region, the Department of Social Security of the Voronezh region, and Moscow state philharmonic hall participated in the project "National Digital Concert Hall". The university hall of VSU became a digital concert hall and the first event of the project was a concert of Pyatnitsky's State Academic Russian Choir. The folk song and dance group "Balalaika" gave a performance before the beginning of the broadcasting of the concert in the Digital Concert Hall. On 22 December, the second concert "Film music" was held for senior citizens and people with limited mobility.
- On 22 April, the 2nd festival of student teams of the Central Federal District took place in the concert hall of Voronezh State University and on the 8 December, the closing ceremony of the third term of Voronezh student team events.
- On 12 April, employees of the Voronezh Chemical Automatics Design Bureau gathered in the VSU concert hall to celebrate the 55th anniversary of the Cosmonautics Day. The meeting was followed by a concert.
- On 16 April, a traditional closing concert of the "University Spring 2016" annual festival took place in the concert hall of Voronezh State University.
- On 23 April, a concert by the Cossack folk group "Volnitsa" took place in the VSU concert hall.
- On 27 May, a musical event, which has become a new great tradition for our university, was held in the University Hall. The musicians from the Academic Symphony Orchestra of Voronezh Philharmonic Hall led by maestro Igor Verbitsky congratulated students and staff on the end of the academic year. On 2 September, a concert by the Voronezh Youth Symphony Orchestra was held to congratulate all VSU employees and students on the beginning of the new academic year.
- On 29 April, the annual entertainment contest, Miss Physics 2016, was held by the Faculty of Physics in the University Hall.
- On 25 May, an international concert dedicated to the international Africa Day was held in the VSU concert hall. International and Russian students from VSU and other artistic teams from Voronezh that were invited took part in the event.

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- On 13 June, a road-train of ISC Paris Business School, which was taking part in a motor rally and making stops in Russian cities with their partner universities, made a stop in Voronezh where one of its partners is Voronezh Sate University.
- On 1 July, the graduation ceremony for the master's students of Voronezh State University was held in a new format in the Admiralteyskaya Square. Over 400 master's students, deans of all faculties and the administration of VSU gathered to start a new university tradition inspired by the example of European universities. Before the official part of the ceremony a column of master's students wearing official academic gowns and caps paraded from the main university building to the Admiralteyskaya Square accompanied by the music performed by the combined orchestra of Voronezh Philharmonic Hall.
- On 1 September, VSU students and staff celebrated the Day of Knowledge. A concert by the Voronezh Philharmonic Hall brass band and the "Cover Brothers" cover band, held at the entrance of the main building, was the university's present to its students.
- On 12 November, Voronezh State University celebrated its 98th anniversary. This important day started with the laying of flowers to the commemorative plaque dedicated to the founders of VSU, which was followed by a festive celebration by VSU students and staff. A cake with the university coat of arms and 98 candles had been specially made for the celebration. A concert by the "Cover Brothers" cover band was the university's present to its students.
- In December, the qualifying rounds of the international song and dance festival "Let's Join Hands" took place in VSU concert hall.
- In 2016, games of KVN's Voronezh regional league were held in VSU concert hall.
- The students festivals "First Year Student" and "Students' Spring" were also held.
- Various dancing teams from Voronezh regularly give concerts in VSU University Hall.

## 8.11. INCLUSIVE EDUCATION AT THE UNIVERSITY

Inclusive education is an integrated process aimed at providing equal access to high quality training by means of using learner-centred techniques that take into consideration the individual features of each student in any activity at an educational institution. The best ways and means for the introduction of inclusive education are defined by regulatory, academic, human resources, infrastructure, and information guidelines.

The main goal for the Centre of Inclusive Education at Voronezh State University is to create an environment which allows providing inclusive education opportunities to people with disabilities. The tasks of the structural subdivision include inclusive education management, dealing with issues of development and maintenance of information technology base for inclusive education and social and cultural rehabilitation.

To accomplish these tasks, the readiness of the educational institution to implement inclusive approached was assessed.



In March 2016, university buildings and residence halls were examined to make sure they meet the inclusive education requirements. Such inner-monitoring allowed the strengths and shortcomings of the organisation of inclusive education at Voronezh State University to be revealed. To achieve this, a committee was formed to examine the buildings and the provided services, its composition and time schedule for the examination and certification process were approved.

The results of the examination carried out by the Centre for Inclusive Education were used to develop and approve Accessibility Passports for buildings where educational services are provided. After that, a plan of action aimed at enhancing accessibility of buildings and services for people with disabilities, i.e. "road map" for the period up to 2030 was developed.

Operational tests of the information system for the monitoring of accessibility passports and the "road map" of the Voronezh State University were completed on 11 November 2016. In the nearest future, the information system for the monitoring will go into production.

An important aspect of work is providing instructions to all VSU employees who can be in contact with people with disabilities at their work places (educational support personnel, academic staff, etc.).

The disability records of students are created when they enter the university and are kept throughout their education up to their graduation. The records are held separately for each year and speciality. To provide a special environment for inclusive education, requests regarding special equipment required for the educational process, specialized adaptation academic programmes of higher professional education (bachelor's, master's or specialist's programmes), and methodological support for the educational process are collected.

From 1 January 2017, all data regarding people with disabilities have been recorded in the federal inter-departmental student contingent record-keeping system.

Currently, Voronezh State University has 126 students with disabilities (which is 37 people more than previous year), including 5 people with hearing disabilities, 10 people with visual disabilities, 25 – with muscle-skeleton disorders, 13 – with general diseases, and 73 – with no category.

In 2016, 5,137,200 roubles was allocated to develop education for students with disabilities, including 2,000,000 roubles for equipment and 3,137,200 roubles for major repairs. According to the passports of the sites and the "road map" equipment was purchased within the Accessible Environment programme. Thus, work places for people with visual disabilities and muscle-skeleton disorders were equipped in the main building and building No 5a.

The university has sound-amplifying, multimedia, and special computer training equipment. There is special equipment for visually impaired students. These are modern screen magnification systems, screen readers (that convert text data into audio data), speech and Braille script recognizers, etc.

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People with disabilities can study in groups with other students or can follow individual programmes. VSU continues works aimed at enhancing accessibility of the territory around the university, entrance to the buildings, and travel paths inside the buildings. Lavatories for students with disabilities are being equipped.

Voronezh State University provides access to its buildings (ramps – university building No 1, university building No 3, university building No 5, university building No 8, university building No 9, residence hall No 1; wheelchair transfer system (staircase lift and wireless assistant call system) – university building No 1 and hall of residence No 9; lavatories for students with various ICD diseases – university building No 1 (ground floor), university building No 8 (ground floor), and university building No 9 (ground floor)).

Students with disabilities receive social, psychological, and pedagogical support over the whole training period: apart from academic scholarships they receive bursaries, extra bursaries and, if necessary, financial aid; they are also offered free holiday packages. Students with disabilities have priority in receiving accommodation at students' residence halls. VSU also organises for them service and employment consultations with representatives of the Voronezh regional rehabilitation centre.

The Centre for Inclusive Education assists in the employment of people with disabilities. In 2016, students with disabilities took part in the contest "On your Way to your Career" organised by the Regional Educational Resource Centre "Accessible Environment".

In December 2016, the foundation of the volunteer centre "Abilimpix" was started in Voronezh State University.

In 2017, human resources problem will need to be solved: according to the methodology requirement, the following positions should be introduced: a tutor, an educational psychologist, and a specialist in training software and tools for people with disabilities.

To further develop the environment for inclusive education of people with disabilities and to protect their right for accessible high quality education the Development Plan for Inclusive Education at VSU was developed for 2017.

All information about the services provided at VSU is publicly available on the university official website that has a version for visually impaired people.



## 8.12. BRIEF SUMMARY OF THE MAIN ACHIEVEMENTS IN 2016

The information presented here can be divided in two groups: the achievements in the sphere of student affairs and creative activity, and the achievements in the social development sphere.

#### THE ACHIEVEMENTS IN THE SPHERE OF STUDENT AFFAIRS AND CREATIVE ACTIVITY:

- The VSU team successfully performed at the annual festival "Students' Spring in the Voronezh Region".
- The VSU team won the first prize at the youth festival "All-Russian Student Marathon".
- VSU became the five-time winner in the Contest of Programmes for Student Communities Development organised by the Ministry of Education and Science of the Russian Federation.
- Participation in the festival of student teams from the universities of the Central Federal District.
- Participation in the 5th tourism meeting "Tourist's Basic Training".
- Participation in the short distance sports tourism championship of Voronezh State University.

#### THE ACHIEVEMENTS IN THE SOCIAL DEVELOPMENT SPHERE:

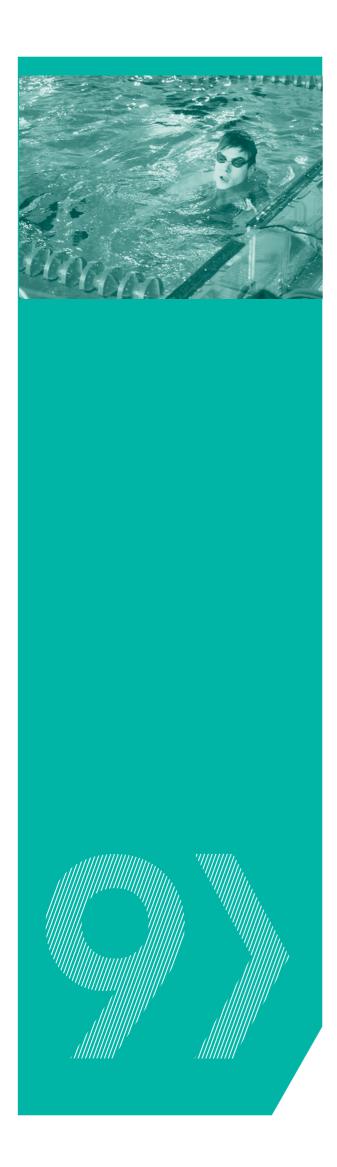
- New Scholarship Regulations were approved.
- Students were offered a new winter holiday destination Kazan.
- The programme of day-off trips for the university employees was implemented.
- Concerts for the university staff were organised in the VSU concert hall.
- Social benefits for students and staff were maintained.











# FACILITIES OPERATIONS AND CONSTRUCTION





V.F. Anokhin, Vice Rector for Facilities Operations and Construction

## FACILITIES OPERATIONS AND CONSTRUCTION

## 9.1. VSU MAJOR OBJECTIVES IN THE AREA OF FACILITIES OPERATIONS AND CONSTRUCTION IN 2016

In accordance with the Federal State Educational Standards, requirements of Article 28, 34, and 41 of the Federal Law of 29 December 2012 No 273-FZ "On Education in the Russian Federation", VSU's major objectives in the area of facilities operations and construction in 2016 included:

- To create a safe learning environment ensuring health of the students and the employees of the educational institution.
- To provide the infrastructure for the educational activities and to equip facilities.

#### VSU MAJOR OBJECTIVES WERE IMPLEMENTED IN THE FOLLOWING AREAS:

1. Facilities operations in accordance with the requirements of technical procedures, design documentation, laws, and regulations of the Russian Federation:

- Facilities maintenance, in-service inspection, and minor repairs.
- In-service inspection of facilities' technical condition by means of regular examination, monitoring of foundations, building structures, and utilities systems to assess facilities' structural and other reliability and safety characteristic.



- Work of authorised specialists responsible for the operation of utility systems, including gas distribution and consumption systems, gas equipment, lift equipment, and the swimming pool equipment.
- In-process monitoring of compliance with the industrial safety requirements in dangerous production units at Voronezh State University.
- Operation of heating power plants.
- Generating its own heating and electricity.

2. Structural surveys and monitoring of buildings and facilities.

3. To perform purchasing functions to provide building and facility operations in compliance with the requirements of the Federal law of 5 April 2013 No 44-FZ "On Contract Systems in the Sphere of Procurement of Goods, Works, and Services for Provisioning Governmental and Municipal Needs" and the Federal law of 18 July 2011 No 223-FZ "Purchases of Goods, Works, and Services by Certain Categories of Legal Entities".

#### The major objectives and goals were achieved by implementing the following projects.

#### Project 1. ENHANCING VSU'S INTERNATIONAL IMAGE BY CREATING FAVOURABLE ACCOMMODATIONS IN HALL OF RESIDENCE No 7 (CONTINUED, IN COOPERATION WITH O.V. GRISHAYEV)

#### Goal:

To ensure compliance of the accommodation services at the hall of residence with:

- The requirements regarding life and health friendly accommodation.
- The quality and the volume of services provided by the best universities of the Russian Federation.

### Project 2. INFRASTRUCTURE MODERNIZATION

#### (CONTINUED, IN COOPERATION WITH YU.A. BUBNOV)

#### Goal:

To manage facilities and resources to ensure efficient academic activities, the development of VSU's research and academic activities.

To create a complex of buildings, facilities, and utilities systems with advanced manufacturing technologies that will help to arrange the environment for research and academic activities.



#### Project 3. VSU'S 100TH ANNIVERSARY – RECONSTRUCTION OF THE MAIN UNIVERSITY BUILDING

#### Goal:

To reconstruct the main university building. To create opportunities for the introduction of the latest advanced technologies for research and education.

#### Project 4. ACCESSIBLE ENVIRONMENT (CONTINUED, IN COOPERATION WITH O.V. GRISHAYEV)

#### Goal:

To implement the state programme ensuring barrier-free access to public amenities. To take measures aimed at creating a living environment that offers equal opportunities to people with disabilities and people with limited mobility.

#### Project 5. SAFETY PRIORITY (CONTINUED)

#### Goal:

To ensure successful academic and research activities.

To create a safe learning environment ensuring health of the students and the employees of the educational institution.

To conduct scheduled and preventive maintenance of fire safety systems at buildings and facilities.

#### Project 6. ENERGY CONSERVATION AND ENERGY EFFICIENCY IMPROVEMENT (CONTINUED)

#### Goal:

To provide energy conservation in buildings.

To meet the requirements of the Order of the Ministry of Education and Science of the Russian Federation of 18 April 2012 No 309.

To conclude instalment of water, natural gas, heating, and electricity metering devices, and to put them into service.

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## 9.2. RESULTS OF THE PROJECTS FOR 2016

#### Project1. ENHANCING VSU'S INTERNATIONAL IMAGE BY CREATING FAVOURABLE ACCOMMODATIONS IN HALL OF RESIDENCE No 7 (CONTINUED, IN COOPERATION WITH O.V. GRISHAYEV)

#### **Result:**

- Installation of 240 metal-filled plastic window assemblies.
- Refurbishment of the common kitchen and a classroom.
- The fitting and adjustment of the metering and automatic control unit for the heating system.
- Replacement of two lifts.

#### Amount invested – 6,673,809 roubles.

#### Project 2. INFRASTRUCTURE MODERNIZATION (CONTINUED, IN COOPERATION WITH YU.A. BUBNOV)

The buildings and facilities of Voronezh State University are comprised of buildings with total area 196,508 m<sup>2</sup>, linear structures, and infrastructure facilities. Each building requires a number of specific actions to be taken to ensure they are functional.

#### **Result**:

1. Automated gas boiler station was commissioned at the address: 10k F. Engels St., Voronezh

#### Amount invested - 7,212,142 roubles.

2. Botanical garden:

- Reinforcement of the open shed metal structure.
- Major repairs of the heating system.
- Landscaping, building of passages, and fencing of the rosary.
- Refurbishment of the administrative building.
- Repairs of the water well.
- Renovation of greenhouses.

#### Amount invested - 18,606,760 roubles.



3. The Galichya Gora nature reserve:

- Construction of gas distribution and consumption systems and gas boiler stations.
- Fencing of the territory of the nature reserve.
- Dismounting operations, landscaping, and garden fixtures.
- Geotechnical investigations.
- Repairs of water supply systems and networks (water tower and well).
- Reinforcement and restoration of the bearing capability of engineering structures in the canteen with due regard to additional functions of the Visit-centre building.
- Unit mounting and refurbishment of the laboratory building.
- Furnishing of premises and outbuildings for the keeping of falcons during winter.

#### Amount invested – 11,549,037 roubles.

4. Venevitinovo sport and fitness complex:

- Reconstruction of the road to the Venevitinovo sport and fitness complex.
- Fencing of the territory.
- Commissioning of facilities for biological treatment of domestic waste water.
- Reconstruction of power supply systems.
- Assembly of power supply systems in cottages.

#### Amount invested – 11,097,443 roubles.

5. Construction of a multifunctional campus sports ground (42 Kholzunov St.).

#### Amount invested – 1,582,846 roubles.

6. Restoring repair of the storage facilities for training military equipment.

#### Amount invested - 19,196,409 roubles.

Total amount invested in the project – 69,244,637 roubles.

#### Project 3. VSU'S 100TH ANNIVERSARY – RECONSTRUCTION OF THE MAIN UNIVERSITY BUILDING

#### **Result**:

- Refurbishment of premises, including large-scale classrooms No 430, 435, 436, 437, 336, and 149d.
- Repairs of the supply and exhaust ventilation in the canteen workshop.

#### Amount invested – 3,142,128 roubles.

#### Project 4. ACCESSIBLE ENVIRONMENT (CONTINUED, IN COOPERATION WITH O.V. GRISHAYEV)

#### **Result**:

- Reconstruction of the main and emergency exit of university building No 7.
- Refurbishment of lavatories and the hall repair works of the power supply systems on the ground floor of university building No 3.

#### Amount invested – 901,318 roubles.

#### Project 5. SAFETY PRIORITY (CONTINUED)

#### **Result**:

#### MAINTENANCE SERVICE OF ENGINEERING AND TECHNICAL SYSTEMS

1. Operational tests of three Minsk-1 water-heating boilers and two KTS-2 water-heating boilers installed at the address: 1 Universitetskaya Square, Voronezh

2. Operational tests of four Universal-5 natural gas water-heating boilers, installed at the address: 10 F. Engels St, Voronezh.

3. Expert examination of industrial safety of technical equipment: of gas equipment of three Minsk-1 water-heating boilers and two KTS-2 water-heating boilers installed at the address: 1 Universitetskaya Square, Voronezh

4. Maintenance, repairs, and emergency control service of gas distribution and consumption system and gas equipment, including:

Site No 1: domestic gas pipeline and gas equipment of the gas boiler station located at: 23 Gruzinskaya St., Somovo settlement, Voronezh.

Site No 2: domestic gas pipeline and gas equipment of the gas boiler station located at: 1 Universitetskaya Square, Voronezh

Site No 3: domestic gas pipeline and gas equipment of the gas boiler station located at: 10 F. Engels St, Voronezh.

Site No 4: domestic gas pipeline and gas equipment of the gas boiler stations located at: Donskoye settlement, Zadonsk District, Lipetsk Region: 9 Electrolux GCB Quantum 24 boilers in boiler stations of residential buildings and 1 ISHMA 63 ES boiler in the boiler station of the administrative and laboratory building.

5. Maintenance of supply and exhaust ventilation systems in university building No 5A, university building No 6 (concert hall), and the swimming pool.

6. Online control service of power transformer substations.

7. Testing (metering) the electricity-generating equipment in university buildings and the electricity-generating equipment in halls of residence.

8. Maintenance of electricity-generating equipment in university buildings.

9. Used luminescent lamps management.



10. Swimming pool:

- Examination of water parameters in the swimming pool.
- Maintenance of refrigeration supply systems of air handling units.
- Maintenance of automatic fire-alarm system units and fire alert units.
- Maintenance of the water treatment system.

11. Maintenance, repairs, and emergency control service of lifts:

- 40A Kholzunov St. 2 lifts.
- 42 Kholzunov St. 2 lifts.
- 42D Kholzunov St. 2 lifts.
- 50 Kholzunov St. 2 lifts.
- 10a Lenin Square 4 lifts.

12. Maintenance of automatic fire fighting systems in university building No 9.

#### Total service cost – 2,925,997 roubles.

#### TECHNICAL EVALUATION OF BUILDINGS, FACILITIES, AND UTILITIES SYSTEMS

1. Visual and instrumental examination of the technical condition of the exterior walls and foundations of the buildings and facilities at the address: building H, H1, building O, O1, building 1A, building 2A, 2B, building 3A, 3B, building D, D1, building T, 1 Botanical garden, Voronezh.

2. Complete structural survey of the building structures of VSU's canteen with the purpose of its major repairs planning. The building is located at: Galichya Gora nature reserve, Zadosk District, Lipetsk Region.

3. Complete structural survey of the building structures of the façades of university building No 9 with the purpose of its major repairs planning.

4. Technical evaluation of university building No 1 at VSU's Borisoglebsk Branch (Borisoglebsk).



5. Visual and instrumental examination. Site: Boiler station at the address: 10K F. Engels St, Voronezh.

6. In-service monitoring of gas distribution and consumption systems and gas equipment at VSU's sites.

7. Monitoring of premises maintenance, safeguarding of protective devices and internal utility equipment at VSU's civil defence shelters.

#### Total service cost – 180,000 roubles.

#### IMPLEMENTATION OF DESIGN WORKS

1. Development of the following technical design specifications for the restoration works in the main building:

- To develop the infrastructure for the Faculty of Biomedical Sciences.
- To dismantle the boiler station in the basement.
- To move TP-423 power transformer substation from the basement and the ground floor into a free-standing facility.
- To move the vivarium from the basement of the main building into a free-standing facility.
- To create the environment that meets the fire safety requirements and makes it possible to introduce advanced and latest research and academic technologies.
- To take measures aimed at creating a living environment that offers equal opportunities for people with disabilities and people with limited mobility.
- To restore façades and to take measures aimed at meeting the energy conservation and energy efficiency requirements.
- To modernize the storm water collector and to install landscaping.

2. "Structural survey of the building structures of the canteen and delivery of design solutions – Technical solution based on the results of the survey of the building structures and the technical evaluation of the canteen" at the Galichya Gora nature reserve. Contract of 13 July 2016 No 3010-15/620-16.

3. Creation of the project regarding the development of the gas infrastructure in the Botanical garden, including gas distribution and consumption systems, two boiler stations for greenhouses, one boiler station for the administrative building, and one boiler station for the garage.

4. Design of 10kV overhead transmission lines and a 63kVA packaged transformer substation for the Nickel academic training base.

#### Total service cost - 682,195 roubles.



#### FIRE PREVENTION

1. Flameproofing of wooden structures of the roof space of the buildings at VSU's Borisoglebsk Branch.

2. Maintenance of automatic fire-alarm system units and fire alert units in the swimming pool and in the buildings of VSU's Borisoglebsk Branch.

3. Collecting, processing, and transmission of fire data in the buildings of VSU's Borisoglebsk branch, engineering follow-up, operation, and maintenance of the fire data transmission system PAK "Strelets-Monitoring" that transmits data via radio communication channels to the desk of the 1st detachment of the Federal Fire-Fighting Service in the Voronezh region.

4. Works in the area of the escape routes to ensure fire safety in university buildings No 2, 3, 5, and 8.

#### Total service cost - 2,520,407 roubles.

## READINESS OF ELECTRICITY AND HEATING SUPPLY SYSTEMS FOR OPERATION DURING THE AUTUMN AND WINTER PERIOD

1. Availability of individual and collective protective equipment, special uniform, necessary tools and components, and emergency fire-fighting equipment.

2. Regular maintenance of the main and auxiliary equipment, buildings, and facilities.

3. Winterization, preparation of heating, water supply, water disposal, electricity, and ventilation systems.

4. Readiness to conduct emergency recovery work in low temperatures. Availability of materials and tools for emergency recovery work. Emergency recovery of water supply lines in university building No 10 was conducted.

5. Engineering certification of:

- Three Minsk-1 water-heating boilers and two KTS-2 water-heating boilers installed at the address: 1 Universitetskaya Square, Voronezh.
- Four Universal-5 natural gas water-heating boilers, installed at the address: 10 F. Engels St, Voronezh.



- Boiler station equipment located at: 23 Gruzinskaya St., Somovo settlement, Voronezh.
- 6. Replacement of lamps and electrical networks.

#### Amount - 2,471,200 roubles.

- 7. Mounting of heating systems for ledges and gutter spouts in university building No 2.
- 8. Instalment of a safety fencing along the façade if university building No 2.

#### Total amount invested – 4,135,076 roubles.

#### Project 6. ENERGY CONSERVATION AND ENERGY EFFICIENCY IMPROVEMENT (CONTINUED)

#### **Result:**

1. Commissioning of water, natural gas, heating, and electricity metering devices:

- Heat metering system in halls of residence No 1, 2, 3, 4, the residential house at the address 3A Mir St., the hall of residence of Voronezh State University of Engineering Technologies at the address 2 Koltsovskaya St., the boiler station at the address 1 Universitetskaya Square, Voronezh.
- Water, heating, and electricity metering devices in the boiler station at the address 10K F. Engels St, Voronezh.
- Water, heating, and electricity metering devices in the swimming pool.

2. The water heating solar system at the Venevitinovo sport and fitness complex was modernized.

3. Over 350 window assemblies were replaced in halls of residence No 6 and No 7 of VSU's Borisoglebsk branch, and university buildings No 1 and No 2.

#### Amount - 2,722,132 roubles.

4. Currently, changes are being made from the production of heating energy by means of electric boilers to the production by means of automated natural gas boiler systems:

- At the Galichya Gora nature reserve, including gas distribution and consumption systems and 10 boiler stations.
- In the Botanical garden, including gas distribution and consumption systems, two boiler stations for greenhouses, one boiler station for the administrative building, and one boiler station for the garage.

5. Replacement of lamps and electrical networks.

#### Amount - 2,471,200 roubles.

6. University building No 3 (room 130) has 24 motion sensor lights.

Total amount invested – 5,193,332 roubles.



Energy resources consumption and costs are shown in Tables 9.1 and 9.2.

#### Table 9.1

### CONSUMPTION OF ENERGY RESOURCES

## 

Type of energy resource	Consumption 2014	Consumption 2015	Consumption 2016
Electrical energy, thousand kW-hour	9,157	8,306.31	7,950.178.00
Natural gas, m3	16,361.1	16,456.33	15,313.17
Heating energy, including hot water, Gcal	15,648	14,440	13,923.564 1,441.470
Hot water, m3	24,749	26,079	29,277.806
Water, m3	879,940	694,095	630,833.71
Total	88,820,700	85,123,200	88,668,870

#### Table 9.2

### COST OF CONSUMED RESOURCES

Type of payment, energy resource	Amount for 2014, roubles	Amount for 2015, roubles	Amount for 2016, roubles
Electrical energy	40,695,700	39,759,200	42,533,490
Natural gas	9,547,900	10,072,100	9,867,720
Heating, including hot water	24,348,000	22,787,100	25,061,460
Water, water disposal	14,238,300	12,505,800	11,206,200
Total	88,829,900	85,123,200	88,668,870

Table 9.3

## LIST OF COMPLETED MAJOR REPAIRS WORK

No	Work item	Source of State-funded, roubles	financing Extra-budgetary financing, roubles
1	Road renovation at the Venevitinovo complex at the address: Venevitinsky settlement, Novousman District, Voronezh Region	7,931,782.04	
2	Refurbishment of the Storage facility for training military equipment for the Faculty of Military Education located at the address: 24 Revolutsii Av., Voronezh.	11,266,811.83 + + 530,065.98	3,968,020.63
3	Refurbishment of the administrative building, landscaping, and fencing of VSU's Botanical garden located at the address: 1 Botanicheskaya St., Voronezh.	7,291,881.38	
4	Fencing of the territory of the Galichya Gora nature reserve located at the address: Donskoye settlement, Zadonsk District, Lipetsk Region.	1,446,542.21	
5	Mounting and commissioning works to replace the basement boiler house located at the address: 10a F. Engels St, Voronezh.	7,055,750.00	
6	Modernization of the water heating solar systems at the Venevitinovo sport and fitness complex	262,500.00	
7	Instalment of a safety fencing along the façade of university building No 2 at the address: 10 Lenin Square	183,127.91	
8	Mounting of heating systems for ledges and gutter spouts in university building No 2 at the address: 10 Lenin Square	365,748.04	
9	Repairs of the supply and exhaust ventilation in the canteen in the main university building No 1 located at the address: 1 Universitetskaya Square	336,256.89	
10	Fencing of the territory of the Venevitinovo sport and fitness complex located at the address: Venevitinsky settlement, Novousman District, Voronezh Region	443,000.00	
11	Replacement of window assemblies in the hall of residence of VSU's Borisoglebsk branch	1,285,132.32	
12	Refurbishment of the confectionery in the canteen in the main university building No 1 located at the address: 1 Universitetskaya Square	632,964.40	
13	Refurbishment of the 6th and 7th floor lavatories in university building No 9 at the address: 10a Lenin Square		1,594,357.18
14	Refurbishment of two lavatories, a hall, and a staircase in university building No 1a at the address: 1 Universitetskaya Square	1,144,404.68	
15	Asphalt-concrete surfacing for a multifunctional sportground in the residential area at the address: 42a Kholzunov St.	1,582,846.29	
16	Ensuring fire safety in university building No 3 located at the address: 24 Revolutsii Av. (order No 655-1-1 of 9 November 2015 regarding corrective actions to meet fire safety regulations)	1,019,395.98	
17	Works in the area of the escape routes to ensure fire safety in university building No 2 located at the address: 10 Lenin Square. (order No 655-1-1 of 9 November 2015 regarding corrective actions to meet fire safety regulations)	608,000.00	
18	Instalment of fire doors and partition walls in university buildings No 5 and 8 located at the address: 40 Kholzunov St, and 88 Moskovsky Av. (order No 655-1-1 of 9 November 2015 regarding corrective actions to meet fire safety regulations)	584,213.56	
19	Archaeological excavation in the territory of a discovered archaeological heritage site "Occupation layer of Voronezh" located at the address: 24 Revolutsii Av., Voronezh		3,236,796.64



#### Table cont. 9.3

		Source of	f financing
No	Work item	State-funded, roubles	Extra-budgetary financing, roubles
20	Dismounting operations, landscaping, and instalment of garden fixtures at Galichya Gora nature reserve located at the address: Donskoye settlement, Zadonsk District, Lipetsk Region.	816,762.24	
21	Repairs of flooring, window assemblies in room 149d in the university main building No 1 located at the address: 1 Universitetskaya Square	157,025.17	
22	Tree felling and demolition of existing buildings located at the address: 24 Revolutsii Av., Voronezh		97,807.59
23	Deconstruction of the asphalt covering and foundation at the address: 24 Revolutsii Av., Voronezh		96,906.27
24	Geotechnical investigations at Galichya Gora nature reserve located at the address: Donskoye settlement, Zadonsk District, Lipetsk Region.	96,515.00	
25	Landscaping of the Botanical garden located at the address: 1 Botanicheskaya St., Voronezh	1,540,396.83	
26	Repairs in university building No 10 located at the address: 14b Nikitinskaya St.	1,109,934.53	
27	Refurbishment of rooms No 430, 435, 436, and 437 in the main university building No 1 located at the address: 1 Universitetskaya Square	1,674,091.81	
28	Refurbishment of a lavatory and a hall and repairs of power supply systems on the ground floor of university building No 3	479,257.84	
29	Construction and installation operations aimed at reinforcement of the metal structure of the pavilion in the main university building No 1 located at the address: 1 Universitetskaya Square		221,789.68
30	Electrical works in cottages at the Venevitinovo sport and fitness complex	1,148,359.05	
31	Structural survey of the building structures and delivery of design solutions (canteen, Galichya Gora nature reserve located at the address: Donskoye settlement, Zadonsk District, Lipetsk Region)		357,184.97
32	Mounting and power restoration operations	995,175.20	
33	Roof repairs in university building No 4 in VSU's Borisoglebsk branch	775,370.00	
34	Refurbishment of the basement at the Galichya Gora nature reserve located at the address: Donskoye settlement, Zadonsk District, Lipetsk Region.	358,137.93	
35	Building of passages and fencing of the rosary in the Botanical garden	1,404,221.50	
36	Renovations of the 3rd and 4th floor lavatories in university building No 9		2,220,543.58
37	Replacement of windows in halls of residence No 7 and No 6 located at the address: 40a Kholzunov St.	1,280,000.00	
38	Electrical works aimed at enhancing electric reliability of the gas boiler station located at the address: 10k F. Engels St.		156,392.26
39	Development of design documentation for gas supply and utility networks in the canteen which had been turned into Visit centre at Galichya Gora nature reserve located at the address: Donskoye settlement, Zadonsk District, Lipetsk Region.		90,000.00
40	Laboratory building unit mounting	2,120,083.33	
41	Survey of the environmental state and health of tree and shrubbery plantings and development of sanitary measures to enhance biopersistence of biocoenosis of the Botanical garden.	8,200,000.00	



#### End of table 9.3

		Source of	financing
No	Work item	State-funded, roubles	Extra-budgetary financing, roubles
42	Replacement of lifts in hall of residence No 7 located at the address: 40a Kholzunov St.	2,626,192.85	
43	Reinforcement of the open shed metal structure located at the address: VSU's Botanical garden, 1 Botanicheskaya St, Voronezh.	191,796.66	
44	Repairs in the boiler station, including furnishing of premises and outbuildings for the keeping of falcons during winter in the territory of the Galichya Gora nature reserve located at the address: Donskoye settlement, Zadonsk District, Lipetsk Region.	248,000.00	
45	Repairs of the roof in university building No 6 located at the address: 40 Kholzunov St.	238,849.85	
46	Renovation of greenhouses	3,157,346.20	
47	Repairs of water supply system at Galichya Gora nature reserve located at the address: Donskoye settlement, Zadonsk District, Lipetsk Region.	1,206,640.57	
48	Refurbishment of the administrative building in the Botanical garden located at the address: 1 Botanicheskaya, Voronezh	820,001.00	
49	Technological integration of the gas supply and gas distribution system during repairs works in the canteen (building A) which had been turned into Visit centre at Galichya Gora nature reserve located at the address: Donskoye settlement, Zadonsk District, Lipetsk Region.	494,535.75	
50	Setting of the foundation for a uniform steel water tower with a 25m <sup>3</sup> tank and a 12m high mount at Galichya Gora nature reserve located at the address: Donskoye settlement, Zadonsk District, Lipetsk Region.	93,458.91	
51	Repair works and reinforcement of engineering structures in the building of Visit centre (Galichya Gora nature reserve) located at the address: Donskoye settlement, Zadonsk District, Lipetsk Region.	3,856,851.79	
52	Mounting of a uniform steel water tower with a 25m <sup>3</sup> tank and a 12m high mount at Galichya Gora nature reserve located at the address: Donskoye settlement, Zadonsk District, Lipetsk Region.	983,141.78	
53	Reinforcement of metal work frame for greenhouses in VSU's Botanical garden located at the address: 1 Botanicheskaya St., Voronezh	355,613.10	
54	Major repairs of the heating system in VSU's Botanical garden located at the address: 1 Botanicheskaya St., Voronezh	3,296,571.50	
55	Research "Study and analysis of environmental and health measures aimed at eliminating pest colonies and diseases in the territory that had been exposed to forest fire" conducted at Galichya Gora nature reserve	395,000.00	
56	Installation of cables and mounting of IP-video cameras for the surveillance system in the territory of the Botanical garden	58,932.11	
57	Mounting of a gas boiler and gas pipes during repair works in the canteen (building A) which had been turned into Visit centre at Galichya Gora nature reserve located at the address: Donskoye settlement, Zadonsk District, Lipetsk Region.	77,071.64	
58	Development of the project regarding the development of the gas infrastructure in the Botanical garden		163,800.00
59	Delivery and mounting of the facilities for biological treatment of domestic waste water at the Venevitinovo recreation facility	579,126.67	
60	Repair works using the university's own resources		12,403,516.88
	TOTAL	84,804,884.32	24,607,115.68

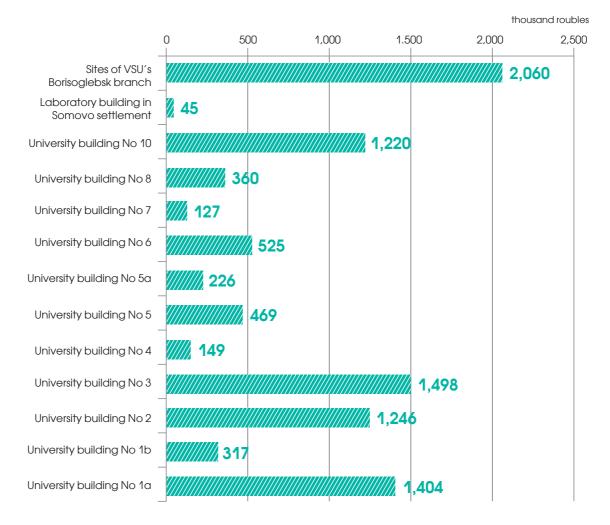
Amount invested - 109,412,000.00 roubles.



## 9.3. CONSTRUCTION AND MAINTENANCE FINANCING BY SOURCE OF FUNDING IN 2016

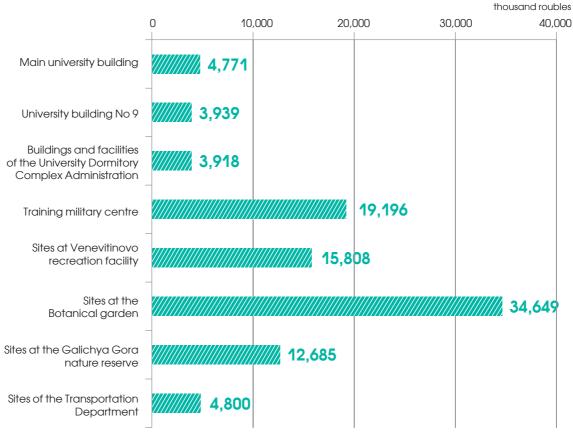
Figure 9.1

#### FINANCING BELOW 3 MILLION ROUBLES



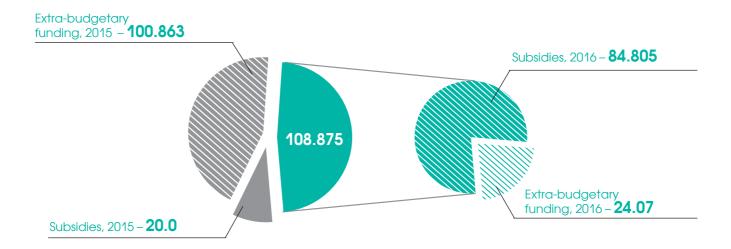


# Figure 9.2 FINANCING OVER 3 MILLION ROUBLES



# Figure 9.3

FINANCIAL STRUCTURE OF WORKS COMPLETED BY THE FACILITIES DEPARTMENT AND CAPITAL CONSTRUCTION DEPARTMENT, million roubles





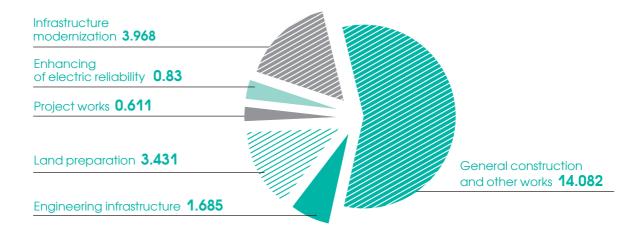
# Figure 9.4

AREAS OF SUBSIDY EXPENDITURE, million roubles



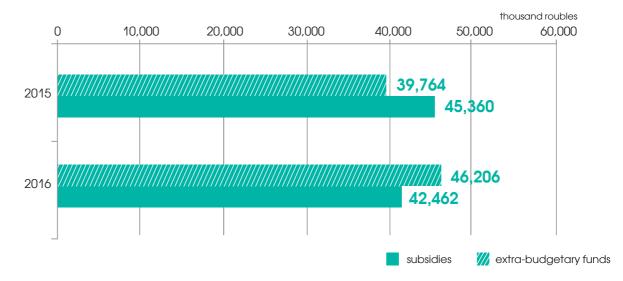
## Figure 9.5

# AREAS OF EXTRA-BUDGETARY FUNDS EXPENDITURE, million roubles



# Figure 9.6

# STRUCTURE OF UTILITY BILLS EXPENDITURE, thousand roubles





# 9.4. INFORMATION ABOUT FUTURE-ORIENTED PROJECTS IMPLEMENTED IN 2016

1. Storage facility for training military equipment (Table 9.4).

Since 1 October 1926, military training with application of training military equipment (anti-tank artillery, anti-tank guided missiles, and other specialised military equipment) has been conducted outdoors.

## Goal:

To create facilities for implementation of military training programmes for soldiers and reserve sergeants and officers and training commissioned officers for further military service under contract.

### Table 9.4

# GENERAL LAYOUT CHARACTERISTICS

No	ltem	Units of measurement	Number		
1	Area of building	m²	646.73		
2	Total area of premises	m <sup>2</sup>	550.49		
3	Area of the land plot within the boundaries of landscaping	m²	1,750		
4	The area of passages	m <sup>2</sup>	540		
5	Designed planting	m²	563.27		
6	Percentage of planting	%			

Partitioning elements of the building fully meet the requirement of SNiP 23-02-2003 "Thermal protection of buildings" regarding thermal and air resistance. All premises are heated, the heating units are equipped with Danfoss RA-N temperature controllers. Building energy rating certificate was developed to prove the compliance with the energy saving and energy efficiency requirements.



2. Automated gas boiler station at the address: 10k F. Engels St., Voronezh.

In accordance with SP 4.13130.2013 Article 6.9 and SP 62.13330.2010 Article 7.1, it is prohibited to install gas equipment in basements, and to install stationary boiler stations (hazardous production unit) under living accommodations.

# Goal:

- To meet the requirements of the Voronezh region department of State Committee for Supervision of Industrial and Mining Practices of Russia of 13 April 1999 No 1-27/349 about elimination of boiler station in the basement of hall of residence No 3.
- To create automated infrastructure facility of high energy performance.

# Result

A modern infrastructure facility was created. The boiler station has the following equipment that functions in an operational mode:

- Four KVa-1.0 boilers with total heat production of 3.44 Gcal-hr, gas consumption of 1.96 thousand TFOE per year, and efficiency coefficient of 93.7%.
- Boiler feed preparation equipment.
- Gas and heat metering systems.
- Automated system of internal natural gas delivery.
- Automated system of thermomechanical solutions.

Thanks to the automation of operating technological procedures the boiler does not require operation of gas boilers by people. The operation of gas boilers in the eliminated boiled station used to require:

- Four boiler operators.
- One operator of instrumentation and control equipment.

Annually, the preparation of the eliminated boiler station for operation during the autumn and winter period involved repairs of the boilers, replacement of heating sections, and engineering certification of four Universal-5 boilers (year of manufacture – 1965).



3. Galichya Gora nature reserve.

A Research, educational, and conservation centre of VSU.

Every year, it is the place where educational and onsite practices are conducted:

- Students live in a tent camp on the outskirts of the forest (if the summer is cold and humid, the tents, sleeping bags, and clothes are damp).
- The food is cooked in conditions that do not meet the sanitary requirements.
- Electric boilers are used to heat the residential buildings and the administration and laboratory building.
- Dumb wells are used for waste water disposal from the residential buildings and the administration and laboratory building.

## Goal:

- To meet the energy conservation and energy efficiency requirements for buildings and facilities.
- To implement the project aimed at developing of business and administrative areas, residential areas, and areas for temporary accommodation for students doing their practice.

# Result

Since 26 October 2016, the following gas distribution and consumption systems and gas equipment for buildings and facilities have been commissioned:

- Nine Electrolux GCB Quantum 24 boilers in boiler stations of residential buildings.
- One ISHMA 63ES boiler in the boiler station of the administrative and laboratory building.

Gas boiler equipment is operated in an automated mode. There is an effective contract of 20 December 2016 No 3010-15/1086-16 for maintenance, in-service inspection, and emergency control service of gas distribution and consumption equipment.

The bearing capability of engineering structures in the canteen is reinforced and reconstructed with due regard to additional functions of the Visit-centre building: boiler station complex, educational and environmental unit, canteen, sanitary and amenity facilities unit, lodging unit for 40 people with systems of water and electricity supply, waste water disposal, heating, ventilation, and fire alarm. Partitioning elements of the building fully meet the requirement of SNiP 23-02-2003 "Thermal protection of buildings" regarding thermal and air resistance. Building energy rating certificate was developed to prove the compliance with the energy saving and energy efficiency requirements.

The following works were accomplished at the nature reserve: fencing, landscaping, and instalment of garden fixtures, geotechnical investigations, repairs of water supply systems and networks (water tower and well), laboratory building unit mounting and refurbishment of the laboratory building, and furnishing of premises and outbuildings for the keeping of falcons during winter.

The set of operations carried out in the territory of Galichya Gora nature reserve will ensure a safe environment for accommodation, research, and environmental and educational activities.



# 9.5. OVERVIEW OF VSU GARAGE OPERATIONS IN 2016

# Tasks and objectives:

- To provide the university subdivisions with cars and lorries to ensure daily educational, research, and operational activities, including during students' summer practices in the Voronezh, Lipetsk, Kursk, Krasnodar regions, the Republic of Crimea, and the Republic of Adygea.
- To keep vehicles in good technical condition.

## **Result:**

- Passenger turnover amounted to 938 thousand passengers.
- Cargo turnover amounted to 80.73 thousand tonnes.
- Total kilometres amounted to 40.17 thousand km.
- In 2016, fuel consumption was as follows:
  - Petrol A-95 52,856 litres.
  - Petrol A-92 49,845 litres.
  - Petrol A-80 10,160 litres.
  - Diesel fuel 19,764 litres.

The following vehicles were accepted into service:

- Toyota Camon automobile.
- Volkswagen Multivan.

Total capacity - 64 passengers.

# Vehicle operating expenditure - 4,870,000 roubles.



# 9.6. BRIEF SUMMARY OF THE MAIN ACHIEVEMENTS IN 2016

Implementation of projects became the main effectiveness criterion for achievement of main objectives in the area of construction and maintenance for 2016:

- Major repairs to hall of residence No 7 were started.
- The infrastructures of the university campus (F. Engels St,), Galichya Gora nature reserve, the Botanical garden, and the Venevitinovo sport and fitness complex were modernized.
- Facilities were created for the implementation of military training programmes for soldiers and reserve sergeants and officers as well as for the training of commissioned officers for further military service under contract.
- Safe learning environment ensuring health of the students and the employees of the educational institution was created.
- The main university building was reconstructed.
- Energy conservation and energy efficiency improvements were made.

The analysis of projects determined the main objectives for 2017 and 2018.

















# MILITARY EDUCATION AT VSU



# MILITARY EDUCATION AT VSU



**Colonel A. A. Scherbakov,** Dean of the Faculty of Military Education

# 10.1. MAIN OBJECTIVES IN THE FIELD OF MILITARY EDUCATION IN 2016:

- Implementation of military education programmes at the VSU Military Training Centre and training commissioned officers for further military service under contract.
- Implementation of educational programmes in military occupational specialities for reserve officers at the Reserve Officer Training Department.
- Implementation of educational programmes in military occupational specialities for reserve soldiers and sergeants at the Reserve Officer Training Department.
- Participation in patriotic educational campaigns dedicated to the 71st anniversary of the Victory in the Great Patriotic War.
- Participation in the commemorative ceremony devoted to the 30th anniversary of the battle between the 245th Motorised Rifle Regiment and a Chechen militia group in the North Caucasus. The ceremony also marked the opening of the VSU History Museum exhibition dedicated to the graduate of the Reserve Officer Training Department Senior Lieutenant O. G. Shevtsov.
- Participation in events devoted to the 90th anniversary of military training at VSU.
- Provision of the military career guidance and patriotic education to the youth.



# 10.2. INFORMATION ABOUT THE MILITARY OCCUPATIONAL SPECIALITIES IMPLEMENTED AT THE VSU FACULTY OF MILITARY EDUCATION

# Main objectives in the field of training students at the Faculty of Military Education:

- Implementation of military training programmes for the Faculty students and organisation of the training period ending with the Military Oath Ceremony for the fourth-year students of the Reserve Officer Training Department.
- Organisation of the final assessment for the students who have completed the training period.
- Organisation of the assessment of graduates to affiliate them to the commissioned staff. Preparation of the Orders of the Ministry of Defence of the Russian Federation to allot service numbers to the graduates and award them the military rank of reserve lieutenant.

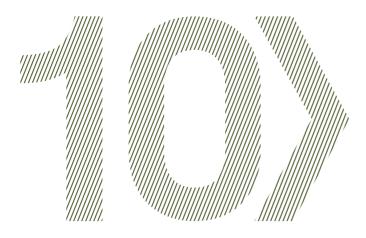
# Main objectives in the field of new admission to the Military Training Centre and the Reserve Officer Training Department:

- Organisation of PR-campaigns to attract University entrants to the Military Training Centre and University students to the Reserve Officer Training Department.
- Revision of the educational process documentation at the Military Training Centre and the Reserve Officer Training Department with its further approval by partners.
- Organisation of the admissions campaign at the Military Training Centre and the Reserve Officer Training Department.
- Enrolment of the University entrants fitting the requirements of the Military Training Centre and students fitting the requirements of the Reserve Officer Training Department (Table 10.1).

# Table 10.1

# INFORMATION ABOUT THE MILITARY OCCUPATIONAL SPECIALITIES IMPLEMENTED AT THE FACULTY OF MILITARY EDUCATION IN 2016

No		Number of students		
	Military occupational speciality	Military Training Centre	Reserve Officer Training Department	
1	Linguistic Support of Military Activities	43	_	
2	Anti-Tank Artillery Warfare	52	90	
3	Anti-Tank Guided Missile (ATGM) Warfare	69	131	
4	Mortar Warfare	-	13	
5	Anti-Tank Artillery Commander	-	40	
6	Anti-Tank Artillery Crewman	-	50	
7	ATGM Vehicle Commander	-	47	
8	ATGM Vehicle Operator	-	76	
9	Mortar Crewman	-	_	
10	Mortar Gun-Layer	-	-	



# **10.3. MILITARY TRAINING CENTRE REPORT**

- The students were admitted to the Centre by the Orders of the Rector after they had passed a military medical examination, aptitude screening tests, a fitness level examination, and signed a contract with the University. The list of the military occupational specialities is given in Table 10.2.
- The Military Training Centre introduced three new military occupational specialities.

# Table 10.2

# ADMISSION TO THE MILITARY TRAINING CENTRE IN 2016

No	Military occupational speciality	Programme (speciality)	Number of students		
1	"Linguistic Support of Military Activities"	45.05.01 – Translation and Translation Studies	5		
2	"Anti-Tank Guided Missile (ATGM) Warfare"	38.05.01 – Economic Security	25		
3	"Anti-Tank Guided Missile (ATGM) Warfare"	01.05.01 – Fundamental Mathematics and Mechanics	25		
4	"Anti-Tank Artillery Warfare"	10.05.01 – Computer Security	25		
5	"Anti-Tank Artillery Warfare"	10.05.04 – Information Analysis Security Systems	25		
6	"Information and Technical Support"	110.05.01 – Computer Security	10		
7	"Information and Psychological Support"	45.05.01 – Translation and Translation Studies	10		
8	"Information Support Organisation"	56.05.05 – War Journalism	10		
	TOTAL		135		



# **10.4. RESERVE OFFICER TRAINING DEPARTMENT REPORT**

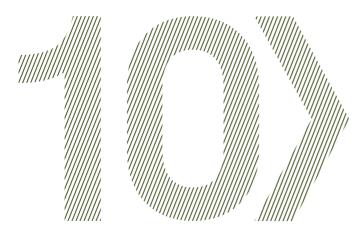
The training period was organised at Troop Unit 30683 stationed in the village of Mulino, the Nizhniy Novgorod region, according to the Orders of the Commander of the Western Military District Troops No 769 dated 19 November 2015 and No 855 dated 25 December 2015 "On the Organisation of the Training Period and Final Assessment of Students Undergoing Military Training at Reserve Officer Training Departments of FSEI HPE in the Western Military District Troops in 2016". The number of students who completed their training period amounted to 200.

In 2016, 74 graduates of the University were allotted service numbers and awarded the military rank of reserve officer by the Orders of the Ministry of Defence of the Russian Federation. 366 students submitted their applications to the Reserve Officer Training Department in the reporting period. The number of admitted students amounted to 199 (Table 10.3).

### Table 10.3

# PROGRAMMES IMPLEMENTED AT THE RESERVE OFFICER TRAINING DEPARTMENT

No	Military occupational speciality	Number of students		
		2nd year	3rd year	4th year
1	Anti-Tank Artillery Warfare	26	23	34
2	Anti-Tank Guided Missile (ATGM) Warfare	47	46	40
3	Mortar Warfare	19	13	-
4	Anti-Tank Artillery Gun Commander	17	23	-
5	Anti-Tank Artillery Crewman	11	39	-
6	ATGM Vehicle Commander	22	25	-
7	ATGM Vehicle Operator	34	42	-
8	Mortar Gun-Layer	7	-	_



# 10.5. EVENTS AND MEETINGS HELD BY THE VSU ADMINISTRATION AND THE FACULTY OF MILITARY EDUCATION IN ORDER TO DEVELOP THE VSU MILITARY TRAINING SYSTEM

On 23 November 2016, a training session "Military Education Serving the Country" was held within the framework of the "Army-2016" forum at the "Patriot" Convention and Exhibition Centre.

Voronezh State University was represented by the VSU Rector, Professor D.A. Endovitsky, the Assistant of the Rector in the field of military education, Professor of the Reserve Officer Training Department V. G. Shamaev, the Head of the Reserve Officer Training Department Colonel A. I. Seredin, and the Head of the Military Training Centre Colonel V. V. Gusev.

Speaking on behalf of the university rectors of the Russian Federation the VSU Rector, Professor D. A. Endovitsky addressed the audience at the plenary meeting "The Goal of Military Education is to Develop" with the report "Qualified Professionals as a Key Factor for the Innovative Development of Russia".

VSU also participated in the development and implementation of the system aimed at selecting university students to study within military training programmes for sergeants (top sergeants) and soldiers (seamen).

# **10.6. BRIEF SUMMARY OF THE MAIN ACHIEVEMENTS IN 2016**

- A number of events were organised to celebrate the anniversary of the Victory in the Great Patriotic War.
- A permanent exhibition was opened at the VSU History Museum. It is dedicated to the graduate of the Reserve Officer Training Department Senior Lieutenant O.G. Shevtsov who was killed in the line of duty.
- A number of events were organised to celebrate the 90th anniversary of military training at VSU.



 A clear system of military education was developed for the non-military university. It includes the following stages:

- 1.5 years of studies at the Reserve Officer Training Department for reserve soldiers.

- 2 years of studies at the Reserve Officer Training Department for reserve sergeants.

– 2.5 years of studies at the Reserve Officer Training Department for reserve officers.

- 5 years of studies at the Military Training Centre for commissioned officers.

- VSU was the only university in the region to carry out the scheduled training of reserve soldiers and sergeants.
- New military occupational specialities were opened at the Reserve Officer Training Department. An admissions campaign was held for the training programmes designed for reserve officers and sergeants.
- An admissions campaign was held for the newly introduced specialities to serve the interests of the Department of Media Affairs and Information of the Ministry of Defence of the Russian Federation, the Main Directorate of the General Staff of the Armed Forces of the Russian Federation, the Main Personnel Directorate of the Ministry of Defence of the Russian Federation, and the Main Missile and Artillery Directorate of the Ministry of Defence of the Russian Federation. These specialities include:
  - War Journalism.
  - Translation and Translation Studies.
  - Economic Security.
  - Fundamental Mathematics and Mechanics.
  - Information Analysis Security Systems.
  - Computer Security
- The admission quotas were approved and allocated for the training of commissioned officers in 2017.
- The speciality "Psychology of Employment Activity" was reintroduced to the admission quotas.
- Documentation was elaborated for the newly introduced military occupational specialities. The documents include:
  - The organisational structure of the Military Training Centre.
  - Qualification requirements to the graduates within each military occupational speciality.
  - An overall calculation of academic hours for each educational programme and their distribution.
  - Curricula, course, practice, training period, and final assessment syllabuses within the military training course.





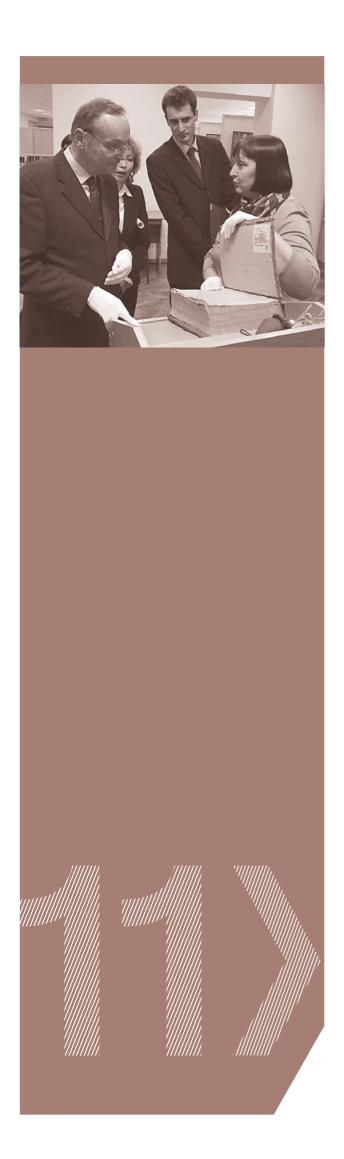




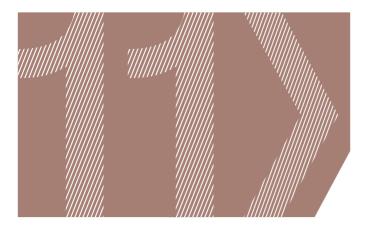




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# VSU REGIONAL SCIENTIFIC LIBRARY





**A. Yu. Minakov,** Director of the VSU Regional Scientific Library

# VSU REGIONAL SCIENTIFIC LIBRARY

The Regional Scientific Library of Voronezh State University is the largest university library in the Voronezh region and is a regional methodology centre for libraries of state higher education institutions in the Central Black Earth Region. It provides methodological assistance and consultations to regional university libraries and organises advanced training courses for their staff members. The library renders its services to various groups of subscribers. It manages a universal multi-purpose collection which houses both Russian and foreign books and documents, diligently preserving this collection for future generations, and provides access to local and remote information resources on the Internet. The full list of services can be found on the library's website www.lib.vsu.ru.

The services are provided in full compliance with ISO international standards. The library was granted with an international quality certificate for its services.

As of 1 November 2016, the unified library collection of Voronezh State University comprised 3,223,959 books and documents in various languages and formats. The collection was completed with the sources necessary for all educational and scientific programmes implemented at VSU according to the Thematic and Typological Acquisition Plan (URL: https://lib.vsu.ru/?p=3&t=8). The study guides fitted the approved requirements for the minimal number of available sources required to ensure an efficient educational process as well as the requirements set in the State Educational Standards. The library is also subscribed to relevant periodicals within the educational and scientific scope of the University. In 2016, the library collection was enriched by 41,570 items. The acquisition expenses amounted to 9,259,010 roubles 51 kopecks. On average, the aggregate collection contained about 122 items per subscriber.



The general ratio of the collection increase was 1.3. The ratio of increase in study guides was 2.2. The majority of items in the collection are books, journals, and scientific and educational literature (Figures 11.1–11.4).

Figure 11.1

COLLECTION STRUCTURE ACCORDING TO THE TYPES OF ITEMS (3,223,959 items as of 1 November 2016)

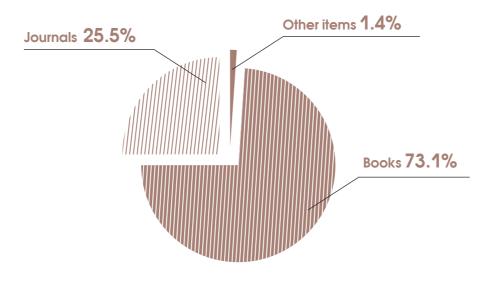


Figure 11.2

COLLECTION STRUCTURE ACCORDING TO THE PURPOSE OF ITEMS (3,223,959 items as of 1 November 2016)

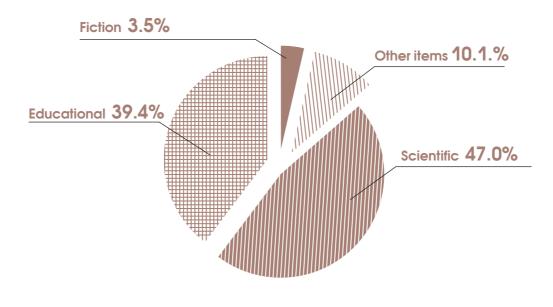
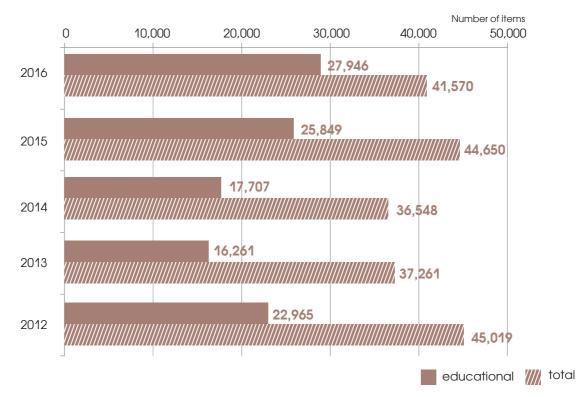




Figure 11.3

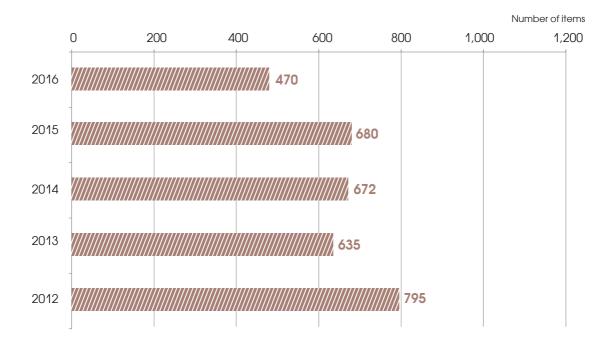
# NUMBER OF NEW ITEMS IN THE COLLECTION





# Figure 11.4

NUMBER OF NEW SUBSCRIPTION PERIODICALS IN THE COLLECTION



The library houses a unique collection of rare documents, which comprises about 100,000 items. It consists of Russian and foreign editions of the XVI–XXI centuries represented by manuscripts, books, and periodicals.

The library actively collaborates with other libraries in Russia and abroad. It also exchanges books with 47 organisations in 18 countries.

In 2016, the library subscribers were able to gain remote access to 614,569 items. To achieve this, the library bought electronic abstract journals and provided access to foreign scientific journals including the databases of Oxford University, Springer Publishing Company, and Cambridge University. Besides, the library subscribers were able to use such e-library systems as "University Library Online", "Student Assist", "Lan Publishing", and "Myilibrary". The library continues to manage the VSU collection on the national digital resource "RUKONT" (URL: http://rukont.ru) as well as a full-text database "VSU E-Library".

The library maintains its e-catalogue, which provides information about the items in the collection, and can be found on the library website. As of 1 December 2016, the catalogue contained 964,776 entries.

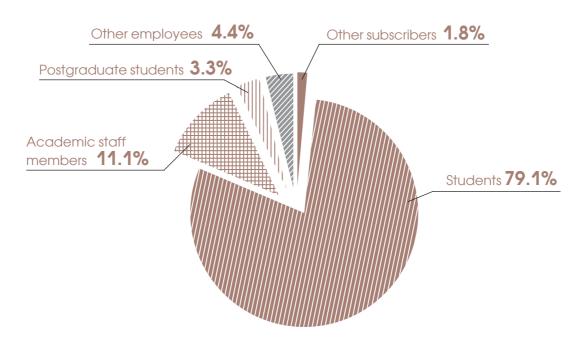


To conserve the University's scientific heritage, the library keeps an electronic index of the works published by VSU staff members. As of 1 December 2016, the index included 184,528 entries. To improve the University's academic rankings, the library updated information about the publications by VSU staff members and uploaded it to the eLIBRARY database. As of 28 December 2016, the University was ranked the 14th among Russian universities by such an essential bibliometric parameter as the number of publications.

In 2016, there were 26,655 entries in the unified registration catalogue of the library subscribers (Figure 11.5). Altogether, the library provided its services to 99,985 subscribers. 634 subscribers were served remotely via their personal accounts. The number of requests to the library website amounted to 86,112.

# Figure 11.5

COMPOSITION OF THE LIBRARY SUBSCRIBERS IN 2016 (a total of 26,655 subscribers)



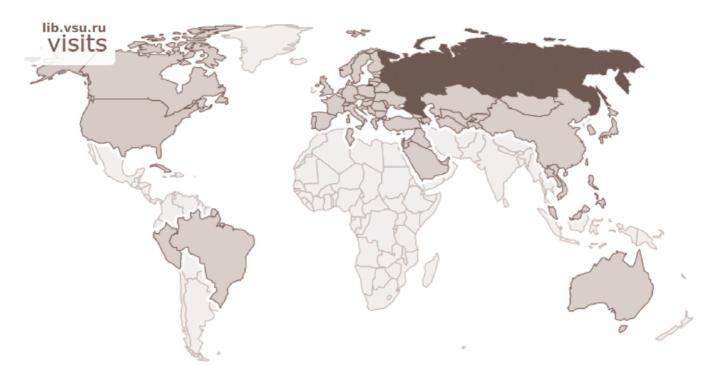


In 2016, the library subscribers had access to 640,638 items, whereas the number of items read online amounted to 33,317.

The library website traffic is thoroughly analysed by means of the statistics module "Piwik", which is a free software programme. Figure 11.6 shows the countries with the requests to the catalogue of the VSU Regional Scientific Library. Such countries are highlighted with dark and light brown.

# Figure 11.6

# REQUESTS TO THE LIBRARY WEBSITE IN 2016 BY COUNTRY







# "GALICHYA GORA" NATURE RESERVE





# "GALICHYA GORA" NATURE RESERVE

# **PROGRESS REPORT FOR 2016**

The "Galichya Gora" nature reserve was founded in 1925 in the territory of what is today the Lipetsk region for conservation and studying the **nonnative** flora of the area. In 1936, the reserve was handed over to Voronezh State University.

It now comprises seven separate sectors of 11 to 96 hectares each, located in four administrative districts of the Lipetsk region. The total area of the reserve is 234.4 hectares. **"Galichya Gora" is included in the Guinness Book of World Records as the smallest reserve in the world.** The protected territory is the centre of the Upper Don relict region with unique landscapes, rich relict flora, and entomofauna.

**N. Ya. Skolznev,** Director of the "Galichya Gora" nature reserve

The reserve is the leading research, educational, and conservation centre of Voronezh State University in the Lipetsk region. High-profile specialists in botany, zoology, and ecology work at the reserve research centre.

The collection contains internationally well-known exhibits, such as the Herbarium of the Middle Russian Hills and Contiguous Territories (42.63 thousand items), the Collection of Invertebrate Animals (298 thousand items), and the Mycological Collection (4.64 thousand items). There is also a weather station and a scientific library.



In 1990, a nursery was created for carnivorous birds registered in the Red Book of the Russian Federation. About 400 saker falcon eyas were released into the wild. Most of the eyas are bought by falconry lovers from Russia and abroad. The reserve also functions as a rehabilitation centre. The old Russian tradition of falconry is gradually being revived.

The reserve was granted a badge of honour for serving Voronezh State University.

# "Galichya Gora" is the only nature reserve in the Russian education and research system.

Last year the reserve's staff members continued to monitor the state and dynamics of the natural habitats. Such monitoring has been regularly carried out since 1974. The 44th volume of "Letopis prirody" was published.

The general research topic "Scientific Basis and Methods for Conserving the Variety of Landscapes and Ecosystems of the Specially Protected Natural Areas in the Upper Don Region" was divided into 10 subtopics covering the main biota taxons of the area: fungi, plants, invertebrate and vertebrate animals.

The "Meridian" motorway, which is planned to be constructed from the border of the Republic of Belarus to the border of the Republic of Kazakhstan, overlaps with some specially protected natural areas in the Lipetsk region. These areas were inspected by the reserve's staff members under a signed administrative agreement.

As a result of the research conducted in 2016, our scientists published the following works:

- 8 monographs (92.5 printed sheets).
- 20 scientific articles and theses, of which 3 papers were published in journals indexed in the Scopus database and 9 in journals included in the Russian Science Citation Index.

2 articles were published in journals included in the list of referenced scholarly journals recommended by the State Commission for Academic Degrees and Titles.

Our researchers took part in 5 national and international conferences with 13 reports.





The most important results of the research conducted in 2016 include:

Preparation and publication of the final summary reports on the biota of the "Galichya Gora" reserve.

- Tsurikov M. N. Bespozvonochniye zapovednika "Galichya Gora" (Invertebrate animals of the "Galichya Gora" nature reserve). Voronezh, VSU Publishing House, 2016, 72 p. (In Russ.)
- Sarycheva L. A. Mikobiota zapovednika "Galichya Gora" (Mycobiota of the "Galichya Gora" nature reserve). Voronezh, VSU Publishing House, 2016, 236 p. (In Russ.)
- Sarychev V. S., Nedosekin V. Yu. Pozvonochniye zapovednika "Galichya Gora" (Vertebrate animals of the "Galichya Gora" nature reserve). Voronezh, VSU Publishing House, 2016, 166 p. (In Russ.)
- Skolzneva L. N., Nedosekina T. V. Flora zapovednika "Galichya Gora" (Flora of the "Galichya Gora" nature reserve). Voronezh, VSU Publishing House, 2016, 222 p. (In Russ.)





Preparation and publication of the study guide.

- Skolzneva L. N., Agafonov V. A., Kirik A. I. Lekarstvenniye rasteniya: klassifikatsiya, otsenka resursov, okhrana i ratsionalnoye ispolzovaniye (Medicinal plants: classification, assessment of resources, and conservation). Voronezh, VSU Publishing House, 2016, 122 p. (In Russ.)
- Participation in the preparation and publication of the multi-authored monograph Jawless Fishes of the World. V. 1. Edited by A. Orlov and R. Beamish. Cambridge Scholars Publishing, 2016, 325 p.

Preparation and publication of popular science books.

- Reki Lipetskoy oblasti: Voronezh. Seriya "Marshruty ekologicheskogo turizma v Lipetskoy oblasti (Rivers of the Lipetsk region: Voronezh. Series "Ecotourism itineraries in the Lipetsk region"). V. S. Sarychev, I. S. Klimov, D. V. Sarychev, D. S. Klimov. Tambov, TPS, 2016, 256 p. (In Russ.)
- Sarycheva L. A. Sezonniye mgnoveniya. Chetyre vremeni goda na Lipetskoy zemle (Seasonal moments. Four seasons of the year in the Lipetsk region). Lipetsk, Veda sotsium, 2016, 256 p. (In Russ.)
- Sarychev V. S., Skolznev N. Ya. Zapovednik "Galichya Gora" (The "Galichya Gora" nature reserve). Voronezh, VSU Publishing House, 2016, 48 p. (In Russ.)

In 2016, experts affiliated with the Botanical Institute of the Russian Academy of Sciences, the Institute of Ecology and Evolution of the Russian Academy of Sciences, the Federal Research Centre "Fundamentals of Biotechnology" of the Russian Academy of Sciences, the Russian Entomological Society, the Russian Geographical Society, the Russian Birds Conservation Union, the All-Russian Research Institute of Medicinal and Aromatic Plants, and various Russian universities and state reserves, visited "Galichya Gora" in order to perform both individual and collaborative research.

Finally, the following works were performed at the site:

- Gas services were installed in the administrative and laboratory building and in nine flats.
- A new fence of approximately four kilometres was erected around the mountain area of Morozova Gora.
- Such facilities as furnaces, awnings, paths, and paved areas were developed for students to pass their practical training.
- Paths leading from asphalted areas to field practice areas, lavatories, and aviaries were paved.
- The plumbing system and the artesian well were repaired.
- The authorities of the reserve continued to overhaul the building of the former canteen converting it into an educational conservation centre, transform technical premises into an educational laboratory facility (a geophysical observatory), and rebuild aviaries.

















# 

# VSU'S CENTRE FOR INFORMATION POLICY





**A.S. Kondratova,** Head of the Centre for Information Policy

# VSU'S CENTRE FOR INFORMATION POLICY

# **13.1. VSU OFFICIAL WEBSITE**

University website news feed (www.vsu.ru) – is a regularly updated source of information about the university's eventful life. It is one of the most popular sections of the university's website – 102,857 views over the previous year. Every day, between three to eight articles about events that were held at the university and the achievements of students and academic staff are published. Moreover, the total number of news stories is increasing annually. All in all, in 2016, 991 news stories were published. The most eventful months were October, November, December, and April. These months, the news feed was updated with over 100 articles.

In 2016, more news stories were published about the university's research and innovation activities and international activities. Since 2016, the sections "Science" and "Innovations" have included information analysis content about innovative projects of Voronezh State University. As of today, the archive includes 43 articles. The stories describe new developments in understandable terms and highlight the university's innovative and research activities. Such articles attract a lot of interest from both regional and federal media.

The number of stories dedicated to pre-university training has also increased. It means that the variety of events held by the university staff for prospective students is expending.

In 2016, the column "International activity" has become a separate section. It can be explained by the rampant development of the university's international activities. VSU continues cooperation with leading western universities, develops double degree programmes, and accepts ambassadors from foreign states.



In 2016, a new column was added to the news feed – "Expert opinion". This section includes interviews with heads of large companies, cultural figures, leading scientists who express their expert opinion on a pressing issue relating to the educational process, specialist training, and cooperation between the university and business community.

In 2016, all faculties started getting ready for VSU's 100th anniversary. This resulted in a great number of news stories about events that are being held in anticipation of the anniversary. In 2017, a special column dedicated to the 100th anniversary will be created.

Many news stories published on the official website are also translated and posted to the English version of the Voronezh State University website (http://www.vsu.ru/english/). Thanks to this fact, many students from international universities who would like to do a course or an internship at VSU as well as international partners can track the news about the university's activities.

# **13.2. VORONEZH STATE UNIVERSITY NEWSPAPER**

Voronezh State University newspaper is published in magazine format (A4, between 20 and 32 columns) and in full colour. It comes out once a month. 19 issues of Voronezh State University newspaper, including special issues, were published in 2016.

All issues were published by VSU's Publishing House. The newspaper production cycle uses two types of production: scheduled editions are published by means of offset printing and special editions with the help of digital equipment.

The paper contains mainly official information and brief reports on the most urgent events at the university. However, most stories are still exclusive. The events and issues discussed in the paper find a broad response among the readers and the VSU administration. The newspaper editorial office carries out fieldwork and expands cooperation with freelance writers. For example, the newspaper considerably expanded the number of columns thanks to news stories by a librarian of VSU's library, Angelika Makarova, VSU's conservator, Vladimir Ryapolov, master's student of the Faculty of Journalism, Anna Litovskaya, and master's student of the Faculty of Philology, Svetlana Vyaznikova. The paper continues publishing problematic questions for open discussion, articles about outstanding people and interesting events, and reports about the work of university lecturers and researchers.

In 2016, the editorial office started preparing materials dedicated to the upcoming university's 100th anniversary. Information graphics developed in cooperation with VSU's Marketing and Advertising Department help to inform readers about the most important dates in university's history.



The list of vacancies for the academic staff provided by the Board of Human Resources and Administrative Policy is published regularly. A number of special issues were published for this purpose. Prior to the rector's elections, the newspaper editorial office published two special issues with information about the candidates and their programmes and necessary official information.

Traditional projects of the Voronezh State University newspaper:

- The English-language supplement "Never Before".
- A special 32 column issue for prospective students was published prior the admission campaign 2016. That was the largest issue of the Voronezh State University newspaper in full colour. It provided detailed information about the university and the admission procedure. It was distributed among prospective students of all VSU's faculties during the campaign. It also attracted a lot of interest from the prospective students and their parents.
- The UniverCity project, the newspaper's supplement dedicated to students' life was continued. Among members of the editorial board are students from different faculties of our university. UniverCity provides students from the Faculty of Journalism and the Faculty of Philology opportunities to practice their skills. While working as board members the students acquire basic journalism skills. Due to cost-cutting in the end of the year, Voronezh UniverCity was changed into electronic format.

In November 2016, Voronezh State University newspaper developed a new supplement – "Science and Innovations". Its articles are dedicated to scientific and innovative discoveries, outstanding VSU's scientists, and schoolchildren's research activities carried out in our university. The supplement will normally come out three times a year.

The digital version of Voronezh State University newspaper can be found on the VSU website (http://www.vsu.ru/ru/publishing/npvu/). Both digital and paper versions of the newspaper attract a lot of attention from their readers. According to statistics, issue No 7 of 29 April 2016 entered the top ten of the most downloaded files from the website.



# **13.3. SOCIAL NETWORKS**

Today, social networks are one of the most popular sources of information. For universities, they offer extra opportunities to attract attention of their students and prospective students to its activities and also to receive feedback from the target audience. The leading media publish the news from their official websites on social networks and popular messengers, which allows considerably increasing the coverage. Leading Russian and international universities, state institutions, governmental authorities, including the Ministry of Education and Science of the Russian Federation have accounts on social networks. VSU's Centre for Information Policy communicates with subscribers of the university's accounts, publishes content, and distributes information among users of social networks, thus increasing their loyalty to the VSU brand.

# VSU's official group on VKontakte

(https://vk.com/vsumain)

During 2016, the number of subscribers of VSU group increased by 2,927 people and is now (according to the data of 7 February 2017) 16,979 people. The maximum number of unique visitors was in September 2016 – 11,080 people, which indicates an increasing interest in the life of the university at the beginning of the new academic year. The visitors to the group come from various regions. First place traditionally belongs to the visitors from Voronezh and the Voronezh region – 72.86%. VSU group also attracts interest of citizens from neighbouring regions (Lipetsk – 2.93%), as well as from Moscow (2.93%), and Saint Petersburg (0.79%). It means that the Voronezh State University brand is well known, not only in our region but also in major university cities.

Following the most interesting events that were held in the university, the administrators of the group make a photo report. Every day, at least five posts are published in the group – "Media about us", news from the official website, news of the faculties and university organisations, previews of events, video reports, competitions, announcements, information about VSU's international activities, and the activities of student organisations. Every day, reposts relevant for students are made from the official VKontakte groups of the Ministry of Education and Science of the Russian Federation and the Federal Service for Supervision in the Sphere of Science and Education of the Russian Federation. The maximum daily post reach was 14,327 views.

The group added a new section "Photo of the month": at the end of each month, a post with the 5–6 most spectacular photos about the university's life is published. Moreover, since 2016, an image post about university has been published each week.



# VSU's VKontakte group "Prospective students in touch with VSU"

(https://vk.com/abitur\_vsu):

On 7 February 2017, the number of subscribers of the VSU group for prospective students was 9,867 people. The administrators of the group publish at least three posts daily, with the most relevant information for school leavers – news from the official website, the section "Pre-university training", the information about enrolment to university programmes from the website www.abitur.vsu.ru, previews of events organised by faculties for school children, and information about pre-study courses and competitions for school children. The staff of the Department of Pre-University Training and Enrolment of Students answer questions about enrolment to the university's programmes which prospective students ask in the group.

Most of the subscribers are users from the Voronezh region (60.09%). Additionally, citizens from neighbouring regions (Lipetsk – 4.55%) and Moscow (2.97%) pay attention to such information. The maximum number of unique visitors was in August 2016 – 5,330.

# VSU's group on Facebook

(https://www.facebook.com/vsumain).

On 7 February 2017, the number of subscribers was 864 people. Every day, at least five posts are published in the group - "Media about us", news from the official website, news of the faculties and university organisations, previews of events, video reports, competitions, announcements, information about enrolment to VSU's programmes, students' organisations activities, and international activities of the university. English-speaking audience can read news on the English version of the VSU's official website (http://www.vsu.ru/english). The maximum daily post reach was 983 views.

# VSU's official account on Instagram

(http://instagram.com/vsumain).

The new account was created on 31 August 2016 and the number of its subscribers today is 553 people. All in all, 234 posts (photos and videos of events which were held in the university) have been made. Also, to create an integrated media space between the students of the university, reposts from the pages of student activists are made.

# VSU's official account on Twitter

(https://twitter.com/vsumain).

The account has existed since 2012 and its administrators have made over 25,500 twits since then. On 7 February 2017, the number of subscribers was 2,464 people. The administrators publish about 12 news and information posts a day, and major university events are broadcast on a regular basis.



Moreover, VSU has an official English Twitter account (https://twitter.com/ vsumainE), which has 451 subscribers. It has over 4,000 publications – news stories from the English version of the official website, posts in English about education and scientific discoveries from the leading international universities.

# VSU's channel on YouTube

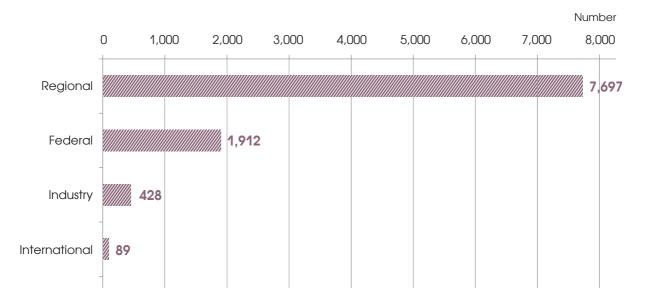
(https://www.youtube.com/user/VSUPRESS).

During 2016, staff of the Centre for Information Policy made and published 68 news videos. Their style was also changed. All in all, in 2016, users watched the videos about our university 27,379 times. The maximum number of views of the same video was 2,256.

# 13.4. VSU MENTIONED IN VORONEZH MASS MEDIA<sup>1</sup>

The media provide extensive coverage of the activities of Voronezh State University. As usual, most news stories were made by the regional media. Compared to 2015, the number of publications made by federal media increased (in 2015 – 1,457 and in 2016 – 1,927). International online media demonstrate solid interest in the university's activities (Figure 13.1).

# Figure 13.1



# REFERENCES TO VSU BY THE SOURCE LEVEL

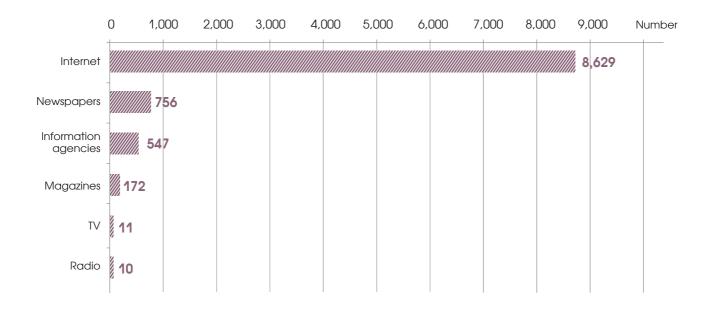
<sup>&</sup>lt;sup>1</sup> According to the data provided by Integrum.



Traditionally, both regional and federal levels are dominated by online media which publish news stories about VSU (Figure 13.2).

Figure 13.2

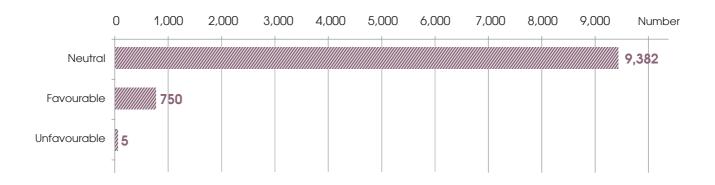
# REFERENCES TO VSU BY THE SOURCE TYPE



All in all, in 2016, there were 10,126 references to Voronezh State University in media, including 9,282 neutral references (Figure 13.3).

Figure 13.3

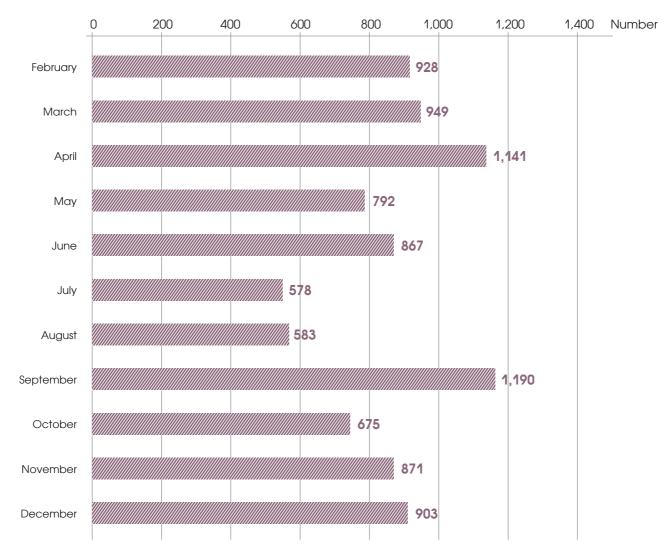
# CHARACTER OF REFERENCES





The news feed overall dynamics demonstrates that most materials about VSU were published by media in April (1,141) and September (1,190) (Figure 13.4).

# Figure 13.4



# OVERALL DYNAMICS



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Translated by Tatiana Borovkova Irina Charychanskaya Yulia Dymant Darya Ostapenko

Edited by Simon Cox