

# 2019

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## ANNUAL REPORT

### FSFEI HE “VORONEZH STATE UNIVERSITY” 2019

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## RECTOR'S ADDRESS





## RECTOR'S ADDRESS



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

2019 marked our university's first step into the second century of its history. This led us to strive to fill the year with meaningful events and innovative activities. We continued our work under the previous year's motto: "VSU for the home city, the region, and the country", which truly reflects the mission we had taken on: being an influential centre of power and authority in education, science, and culture, in the Voronezh Region, the Central Federal District, and the country as a whole, while maintaining our leadership position in the national academic community.

The data contained in this report provides a quantitative and factual representation of this statement. Our employees' achievements, made through hard work and creative endeavours, are reflected in the independent ratings and opinions of numerous competent experts, both Russian and international.

We strengthened and expanded our contacts with secondary schools, industrial enterprises, and business structures, as well as international centres of research and education; made our contribution to interuniversity collaboration, working within the Russian Union of Rectors, the Council of Rectors of the Voronezh Region, the Association of Central Russian Universities, and the Eurasian University Association.



Today, we can state with satisfaction that the last year saw us grow stronger and more confident in the academic and scientific framework of the country, reinforcing a sense of community among the university's faculty, staff, and students, and becoming more proactive and persistent in completing all our undertakings. I consider it our joint achievement that we have made progress in resisting any negative processes and trends, as well as finding ways to deal with the challenges that we are forced to face.

All this was only made possible thanks to the intensive collaborative efforts from all the university's elements, the latter referring not to any departments or offices, but to the people, brought together by common values and goals.

Thus, the key management principle for myself and my colleagues in the Rector's office, for the reporting year and since, has been the creation of an enabling and supportive environment for effective work and studies; providing organizational, logistic, and moral support for the initiatives and activities aimed at strengthening and developing the university, and enhancing its relevance in the region and the academic community as a whole.

Here are some examples illustrating our results in 2019.

1. The revenue budget of the university grew by 260 million roubles and reached 2.89 billion roubles. Due to the acquisition of new property, the asset value increased by 182 million roubles and amounted to 4.1 billion roubles. As for research funding, we crossed the threshold of 300 million roubles.
2. Analysing the results of the 2019 admission campaign, it is with satisfaction that we note an improvement in the quality of admissions. The average state exam score for state-funded places was 74.8 points, with the university processing the data of applicants from 82 subjects of the Russian Federation.
3. We have also made significant managerial decisions regarding the university's internationalization, overseeing a multi-fold increase in the number of international students admitted to the first year main academic programmes and master's programmes. Another 1000 international applicants were unable to be admitted to the university due to there not being enough rooms in the university's halls of residence.
4. We strengthened our positions among Russian universities in developing collaboration with the research and educational institutions of the European Union, and the Centre for EU studies has been opened at VSU.
5. Yet another outstanding achievement was the establishment of the Voronezh Regional Centre for Artificial Intelligence – a scientific and educational complex that is unique to the Central Federal District, opened in collaboration with PAO *Sberbank*, *Rostec* Group of Companies (Concern *Sozvezdiye*), PAO *NLMK*, and the *Intechros* company. This is a great example of effective interaction between the university and businesses in addressing the tasks of developing technologies that are of critical importance for the Russian Federation.



6. We are successfully implementing the roadmaps for the projects of the Voronezh Regional University Centre for Innovative, Social, Economic, and Cultural Development and the Flagship University of *Rosatom* state corporation.
7. In 2019, high-tech laboratory and training equipment was purchased, with total investment amounting to 100 million roubles.
8. In the *Innovation Cup 2019* competition, held by the Government of the Voronezh Region, VSU was yet again recognized as the region's best innovative university.
9. In the *Russian Student Marathon* national youth competition, the team of Voronezh State University "Doctor of Sciences, Professor Shvarzengolt" became the absolute champion.

At the same time, no one at this Rector's office (nor, I am convinced, any of you) feels like they can afford to rest on their laurels.

- First, there are still many challenges to overcome, opportunities to be taken advantage of, and reserves to be tapped into.
- Second, we are clear-eyed about the challenges and hardships of the reality that the university staff are currently working in. We are learning to face them, and do not always have the ability to foresee them and take preventive action.
- Third, we also need to be able take advantage of the human capital, both within and outside the university walls.

Naturally, all of these have to be considered when analysing the results of 2019 and planning ahead for 2020.



I believe that our work in 2019 has enabled us to overcome difficulties and make an effort to resolve any deficiencies in order to address the challenges presented by 2020. Our objectives are as follows.

- 1.** To ensure a high standard of quality and effectiveness of academic, scientific, and educational work, not in abstract terms, but in terms of specific indicators for each element of the university's structure.
- 2.** To preserve and strengthen the spiritual and moral atmosphere of the university staff, and implement a set of social support measures for university employees and students.
- 3.** To take an active part in the implementation of national projects, including the coordination work of Voronezh State University in preparing applications for competitions to establish education and research centres, as well as to continue our extensive efforts towards preparing an application for a new competition called 5-100 aimed at increasing the international competitiveness of Russian universities.
- 4.** To consistently address the issues of digitizing all types of university activities.
- 5.** To carry out the events planned as part of celebrating the 75th anniversary of the Victory in the Great Patriotic War.

The university's mission of education, social development, enlightenment, and science, which we undertook and which we are now responsible for, does not allow for complacency, a formalistic approach, or stagnation. We must constantly strive to maintain and increase our achievements, to meet the requirements of the times, and to move forward and develop. And it is this concern that must make us ready for action, every single day.

In order to tackle all this extensive, complex, and challenging work, we are to make good use of our time-tested traditions, accumulated experience, sound strategic guidelines for the university's development, and the clear criteria and provisions of the national policy in the field of higher education and science as identified by President Vladimir Putin in his Address to the Federal Assembly on January 15 and at the State Council Praesidium meeting on February 7, 2020.

I am convinced that the university's employees see these objectives clearly and are prepared to pursue them in the most responsible and creative manner. I have every reason to believe that this is the case. And it is on this note that I would like to introduce you to a more detailed report on our work in 2019, which will allow you to look at the activities performed by each of the university's structural units in specific fields and areas.







# UNIVERSITY ADMINISTRATION

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# 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 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 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 31 people.

Since 21 June 2018, the position of the Chair of the Board of Trustees has been occupied by the Governor of the Voronezh Region, **Alexander Gusev**.

Deputy Chairs

of the Board of Trustees – **Alexander Sokolov,  
Elena Soboleva,  
and Evgeny Yurchenko**

Secretary

of the Board of Trustees – **Dmitry Zhukalin**

### MEMBERS OF THE VSU BOARD OF TRUSTEES

1. **Azret Bekkiev**, Deputy General Director of AO *United Instrument Manufacturing Corporation*.
2. **Anton Ganzha**, Regional Manager of *Vnesheconombank*.
3. **Yury Goncharov**, President of the Voronezh Regional Chamber of Commerce and Industry.
4. **Tatiana Davydenko**, Vice-Rector for Innovations of FSFEI HE *V.G. Shukhov Belgorod State Technological University*.



5. **Boris Danshin**, Director General of AO *Informsvyaz-Chernozemye data provider*.
6. **Dmitry Endovitskiy**, Rector of FSFEI HE *VSU*.
7. **Viktor Yenin**, Director General of UK IP *Perspektiva*.
8. **Valentin Ievlev**, 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*.
9. **Alexey Kamyshev**, Head of the Project for creating new electronic component production activities.
10. **Dmitriy Lapygin**, Director of Economic Affairs of OOO *RET*.
11. **Valeriy Lukinov**, Director General of OOO *Stel-invest*.
12. **Mikhail Mamuta**, Head of the Service for Consumer Rights Protection and Finance Service Accessibility of the Bank of Russia.
13. **Nadezhda Mazalova**, Director General of OOO *Region-Terminal*.
14. **Mikhail Moskaltsov**, Head of the main Voronezh regional office of the Central Black Earth Branch of PAO *Sberbank*.
15. **Mikhail Nosyrev**, attorney, President of ZAO *Spartak Cinema*.
16. **Alexey Ponomarev**, Vice President for Strategy & Industrial Cooperation of the Skolkovo Institute of Science and Technology (Moscow).
17. **Edgars Puzo**, Director General of *Atos IT Solutions and Services LLC*.
18. **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*.
19. **Vladimir Salmin**, Chairman of the Central Black Earth Branch of PAO *Sberbank*.
20. **Elena Soboleva**, Director of Educational Projects and Programmes of the Fund for Infrastructure and Educational Programs (RUSNANO, Moscow).
21. **Alexander A. Sokolov**, Vice-Rector for Building Operation and Capital Development of FSFEI HE *VSU*.
22. **Denis Stolyarov**, Admissions Director of the Skolkovo Institute of Science and Technology.
23. **Natalia Tretyak**, First Vice President of AO *Gazprombank*.
24. **Stephen Hagen**, Honorary Professor of the University of South Wales and a higher education expert of the European Commission (the UK).
25. **Heinze Klaus-Dieter**, Head of the chemical/industrial technopark (Dow Olefinverbund GmbH Leiter ValuePark, Germany).



**26. Andrey Hitskov**, Director of the Voronezh Operations Centre of *VTB*.

**27. Valeriy Chernikov**, Board Chairman of *AO Insurance Business Group*.

**28. Gennadiy Chernushkin**, Founder of *Angstrom Group*.

**29. Elena Chupandina**, First Vice-Rector – Vice-Rector for Academic Affairs of FSFEI HE *VSU*.

**30. Anatoliy Shmygalev**, Deputy of the VI Voronezh Regional Duma.

**31. Evgeniy Yurchenko**, Chairman of A.S. Popov Investment Fund (Moscow).

In 2019, there was one session of the Board of Trustees focused on the current issues concerning the University's development: establishing VSU's innovative infrastructure, research and educational laboratories organized in collaboration with the University's industrial partners; presenting VSU's innovative projects, etc.

### **KEY RESULTS OF THE ACTIVITIES OF THE VSU BOARD OF TRUSTEES IN 2019**

1. The decision was made to equip the White Hall of the main university building with a state-of-the-art multimedia system.
2. PAO Sberbank's decision to establish a joint laboratory of artificial intelligence at the University's premises was supported.
3. A number of proposals were made, aimed at commercializing the results of the innovation projects developed by the University scholars.
4. A decision to create the Atlas of Laboratories was supported.

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](http://www.vsu.ru)



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

### MEMBERS OF THE VSU ACADEMIC BOARD

1. **Dmitry ENDOVITSKY,**  
Rector, Chairman of the Academic Council.
2. **Elena CHUPANDINA,**  
First Vice Rector – Vice-Rector for Academic Affairs,  
Deputy Chairperson of the Academic Council..
3. **Yury BUBNOV,**  
Vice-Rector for Strategic Administrative Management.
4. **Oleg GRISHAEV,**  
Vice-Rector for Student Affairs and Social Development.
5. **Oleg KOZADEROV,**  
Vice-Rector for Research and Innovations.
6. **Larisa KOROBEINIKOVA,**  
Vice-Rector for Economics and Contract Services.
7. **Alexander SOKOLOV,**  
Vice-Rector for Building Operation and Capital Development.
8. **Leonid AKIMOV,**  
Head of the Department of Nature Management of the Faculty of Geography,  
Geoecology, and Tourism.
9. **Alla AKULSHINA,**  
Head of the International Project and Programme Centre.
10. **Eduard ALGAZINOV,**  
Dean of the Faculty of Computer Sciences.
11. **Elena ALEKSEEVA,**  
Head of the Department of French Philology of the Faculty of Romance  
and Germanic Philology.
12. **Alexander ALBEKOV,**  
Associate Professor of the Department of Mineralogy,  
Petrology, and Geochemistry of the Faculty of Geology.
13. **Alexander BAEV,**  
Dean of the Faculty of Mathematics.
14. **Aleksandr BELANOV,**  
Head of the Department of Physical Education and Sports.
15. **Oleg BELENOV,**  
Dean of the Faculty of International Relations.



**16. Olga BERDNIKOVA,**

Dean of the Faculty of Philology.

**17. Olga BORISKINA,**

Dean of the Faculty of Romance and Germanic Philology.

**18. Lydia BORISOVA,**

Associate Professor of the Department of Translation and Professional Communication of the Faculty of Romance and Germanic Philology.

**19. Kira VASILIEVA,**

Academic Secretary of the Academic Council.

**20. Lyudmila VLADIMIROVA,**

Chair of the Trade Union Committee.

**21. Alexey VLASOV,**

Head of the University Dormitory Complex Administration.

**22. Karina GAIDAR,**

Head of the Department of General and Social Psychology of the Faculty of Philosophy and Psychology.

**23. Sergey GAPONOV,**

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

**24. Vladimir GLAZIEV,**

Dean of the Faculty of History.

**25. Alexandra GLUKHOVA,**

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

**26. Evelina DOMASHEVSKAYA,**

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

**27. Valentin IEVLEV,**

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

**28. Alexander KAZHIKIN,**

Associate Professor at the Department of Advertising and Design of the Faculty of Journalism.

**29. Pavel KANAPUKHIN,**

Dean of the Faculty of Economics.

**30. Ludmila KOLTSOVA,**

Head of the Department of the Russian Language at the Faculty of Philology.

**31. Liudmila KONOVALOVA,**

Head of the Department of Academic Staff Assessment.

**32. Yury KORENCHUK,**

Head of the Military Training Centre.

**33. Vladimir KOSTIN,**

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

**34. Lyubov KOT,**

Associate Professor of the Institute of International Education's Humanities Department.

**35. Artem KRIVOSHEYEV,**

Head of the Planning and Finance Department.

**36. Andrey KUDRYAVTSEV,**

Associate Professor of the Department of Criminal Law of the Law Faculty.

**37. Kristina KULESHOVA,**

Head of the Career Development and Business Partnership Department.

**38. Olga KUPRYUSHINA,**

Associate Professor at the Department of Economic Analysis and Audit of the Faculty of Economics.

**39. Semyon KUROLAP,**

Dean of the Faculty of Geography, Geoecology, and Tourism.

**40. Sergey MEDVEDEV,**

Associate Professor of the Department of Computational Mathematics and Applied Information Technologies of the Faculty of Applied Mathematics, Informatics, and Mechanics.

**41. Arkadiy MINAKOV,**

Professor of the Department of Russian History of the Faculty of History.

**42. Grigory NAGIRNYAK,**

Director of the VSU swimming pool.

**43. Viktor NENAKHOV,**

Dean of the Faculty of Geology.



**44. Tamara NIKONOVA,**

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

**45. Elena NOSYREVA,**

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

**46. Oleg OVCHINNIKOV,**

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

**47. Tatiana POPOVA,**

Dean of the Faculty of Biomedical Sciences.

**48. Alexey PROKHORCHENKO,**

Head of the User Support Department.

**49. Vladimir RODIONOV,**

Director of the International Education Institute.

**50. Natalia SAPOZHNIKOVA,**

Head of the Department of Accountancy of the Faculty of Economics.

**51. Igor SVERTKOV,**

Director of the Borisoglebsk branch of Voronezh State University.

**52. Vladimir SELEMENEV,**

Consulting Professor of the Department of Analytical Chemistry  
of the Faculty of Chemistry.

**53. Viktor SEMYONOV,**

Dean of the Faculty of Chemistry.

**54. Aleksander SIROTA,**

Head of the Department of Information Processing  
and Protection Technologies of the Faculty of Computer Sciences.

**55. Nikolay SKOLZNEV,**

Director of the Galichya Gora reserve.

**56. Aleksey SLIVKIN,**

Dean of the Faculty of Pharmaceutics.

**57. Yuriy STARILOV,**

Dean of the Faculty of Law.

**58. Andrey STARTSEV,**

Chairman of the primary trade union organization of VSU students.

**59. Olga TRINEEVA,**

Associate Professor of the Department of Pharmaceutical Chemistry  
and Pharmaceutical Engineering of the Faculty of Pharmaceutics.





- 60. Vladimir TULUPOV,**  
Dean of the Faculty of Journalism.
- 61. Olga URYVSKAYA,**  
Chief Accountant.
- 62. Konstantin FEDUTINOV,**  
Second Category Engineer of the Computing Technology Laboratory.
- 63. Ekaterina TSEBEKOVA,**  
Associate Professor of the Department of International Economics  
and International Business of the Faculty of International Relations.
- 64. Viktor SHAMAEV,**  
Professor at the Reserve Officer Training Department.
- 65. Alexander SHASHKIN,**  
Dean of the Faculty of Applied Mathematics, Informatics, and Mechanics.
- 66. Alla SHESTERINA,**  
Professor of the Department of Television and Radio Journalism  
of the Faculty of Journalism.
- 67. Khidmet SHIKHALIEV,**  
Head of the Department of Organic Chemistry of the Faculty of Chemistry.
- 68. Igor SHUMSKIKH,**  
Main University Building Superintendent.
- 69. Victoria DOROKHINA,**  
3rd year student of the Faculty of Pharmaceutics.
- 70. Elena KRETININA,**  
3rd year student of the Faculty of History.
- 71. Viktoria PEREVOZNIKOVA,**  
2nd year student of the Faculty of Mathematics.
- 72. Maria RUSANOVA,**  
Master's degree student of the Faculty of Philosophy and Psychology.
- 73. Raisa SHAMAILOVA,**  
3rd year student of the Faculty of Law.



## LIST OF KEY ISSUES CONSIDERED BY THE ACADEMIC COUNCIL IN 2018/19

### SEPTEMBER

1. The results of the 2018 admission campaign (executive in charge – E. Chupandina).
2. Approving the admission rules for the main academic programmes offered by VSU in 2019. Allocating the admission quotas among the programmes (executive in charge – E. Chupandina).
3. Determining the continuing professional training development strategy (executive in charge – N. Batsunov).
4. Cold weather adaptation of the university buildings and facilities (executive in charge – A. Sokolov).

### OCTOBER

1. The results of the educational activity in higher professional and secondary vocational education programmes in 2017/18 (executive in charge – E. Chupandina).
2. Report on the results of the performance of the University's branch in Borisoglebsk in 2017/18 (executive in charge – I. Svertkov).
3. Forming a purchasing plan for 2018 (executive in charge – L. Korobeinikova).
4. Granting badges of honour (executive in charge – Yu. Bubnov).

### NOVEMBER

1. Report on the implementation of the program "VSU as a centre for innovation" (executive in charge – V. Popov).
2. Approving the plan for improving the University's system of financial management (executive in charge – L. Korobeinikova).
3. Awarding academic titles in October (K. Vasilieva).

### DECEMBER

1. VSU internationalization: 2018 in review, upcoming trends (executive in charge – O. Belenov).
2. Report on the performance of the International Education Institute in 2017/18 (executive in charge – V. Rodionov).
3. The implementation of VSU's development programme and promoting VSU in Russian and international rankings (executive in charge – Yu. Bubnov).
4. The organizational changes in the University's structure (executive in charge – Yu. Bubnov).
5. Competition, election (executive in charge – Yu. Bubnov).



## JANUARY

1. Report on the results of the University's research and innovative performance in 2018 (executive in charge – O. Kozaderov).
2. Report on the University's social development in 2017/18, and approving the plan for the next academic year (executives in charge – O. Grishaev, L. Vladimirova).
3. Inclusive education at the University: current stage of development and key objectives for 2019 (executive in charge – O. Grishaev).

## FEBRUARY

1. Report on the implementation of the University's further education programmes in 2018 (executive in charge – E. Chupandina).
2. Report on the condition of the University's property assets and updating its modernization programme (executive in charge – A. Sokolov).

## MARCH

1. Financial and operating performance of VSU: the results of 2018 and plan of financial and business operations for 2019 (executive in charge – L. Korobeinikova).
2. Granting badges of honour (executive in charge – Yu. Bubnov).

## APRIL

1. Rector's report on the results of the University's performance in 2018 (executive in charge – D. Endovitsky).
2. Approving the tuition fees for each of the categories of the university students in 2019/20 academic year (executive in charge – L. Korobeinikova).
3. The results of VSU's Students' Council activities and its modernization (executive in charge – O. Grishaev).
4. Awarding academic titles (executive in charge – K. Vasilieva).

## MAY

1. Report regarding the implementation of the plan of anti-corruption measures at the University in 2018, and the plan for 2019 (executive in charge – A. Kudryavtsev).
2. Report on the University's educational work in 2017/18, and approving the plan for the next academic year (executive in charge – O. Grishaev).
3. The organizational changes in the University's structure (executive in charge – Yu. Bubnov).

## JUNE

1. The condition and prospects for the University's informatisation (executive in charge – O. Kozaderov).
2. The implementation of the Academic Council's decisions in 2018–2019, and approving the plan of the Council's activities in 2019–2020 (executive in charge – E. Chupandina).
3. Competition, election (executive in charge – Yu. Bubnov).



## 2.3. RECTOR'S OFFICE

### Rector

#### **Dmitry ENDOVITSKY**

DSc in Economics, Professor. Honoured Worker of the Highest Vocational Education of the Russian Federation. The author of 590 research papers and works. Advisor for 4 postdoctoral and 62 PhD theses.

**Phone: +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, Professor, Head of the Department of Economics and Management in Pharmaceutics and Pharmacognosy. The author of 299 research papers and works. Advisor for 4 PhD theses.

**Phone: +7 (473) 220-87-31**

**E-mail: chupandina@vsu.ru**

### Vice-Rector for Research and Innovations

#### **Oleg KOZADEROV**

DSc in Chemistry, Associate Professor, Head of the Department of Physical Chemistry. The author of 167 research papers and works.

**Phone: +7 (473) 220-75-33**

**E-mail: kozaderov@vsu.ru**



### **Vice-Rector for Economics and Contract Services**

#### **Larisa KORBEINIKOVA**

PhD in Economics, Associate Professor, Head of the Department of Economic Analysis and Audit. The author of 530 research papers and works, including 4 monographs. Advisor for 1 PhD thesis, 1 more thesis is being prepared for presentation.

**Phone: +7 (473) 222-60-92**

**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, Head of the Department of History of Philosophy of the Faculty of Philosophy and Psychology. The author of 155 research papers and works. Advisor for 1 postdoctoral and 8 PhD theses.

**Phone: +7 (473) 220-77-73**

**E-mail: bubnov@vsu.ru**

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

#### **Oleg GRISHAEV**

PhD in History, Associate Professor, Head of the Department of Historiography and Records Management. The author of over 100 research papers and works. Advisor for 1 PhD thesis.

**Phone: +7 (473) 239-06-86**

**E-mail: grishaev@vsu.ru**

### **Vice-Rector for Facilities and Capital Development**

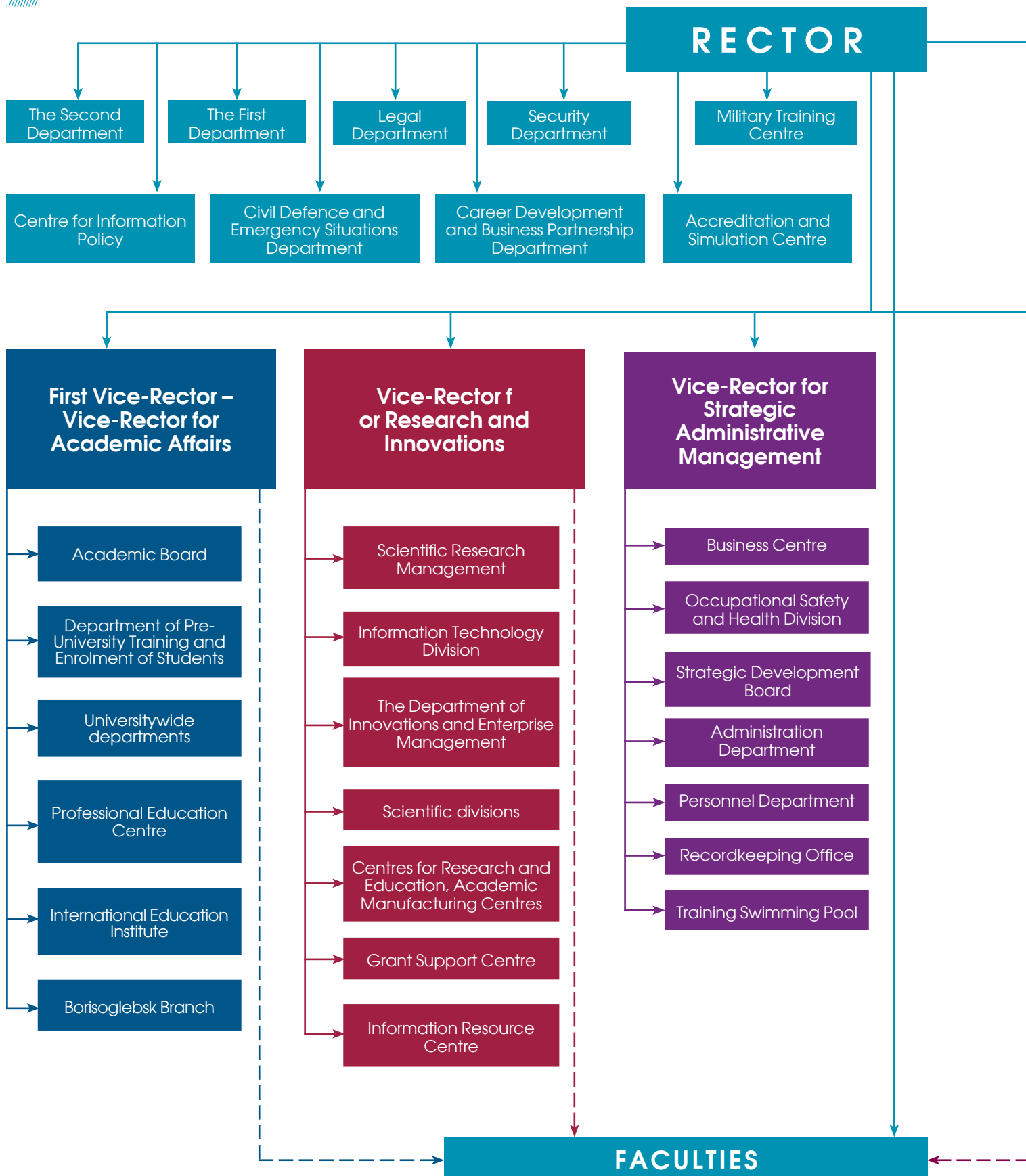
#### **Alexander SOKOLOV**

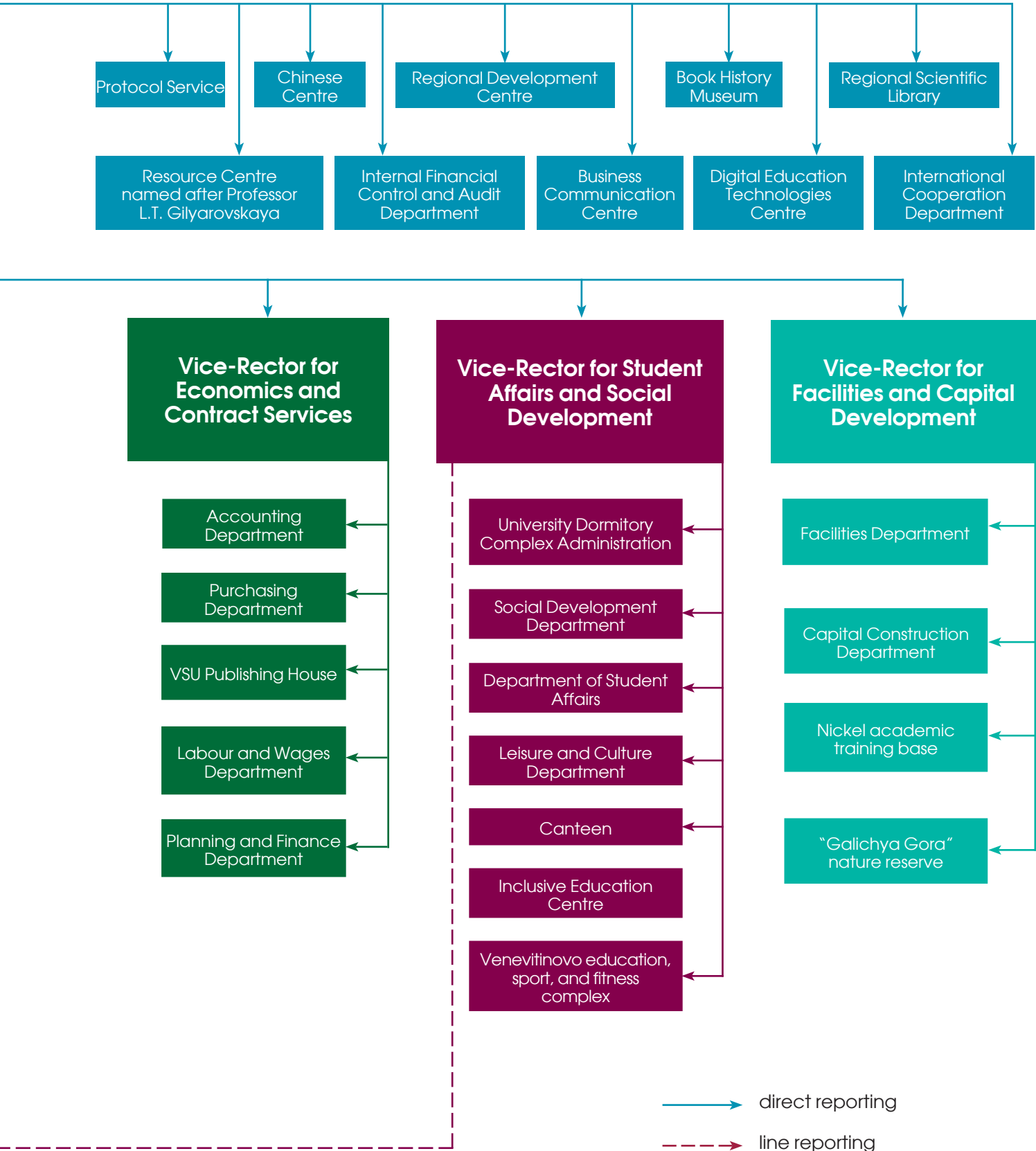
DSc in Economics, Associate Professor. The author of 50 research papers and works, including 2 monographs. Advisor for 2 PhD theses.

**Phone: +7 (473) 220-75-18**

**E-mail: sokolov@vsu.ru**

## 2.4. THE GENERAL STRUCTURE OF VORONEZH STATE UNIVERSITY

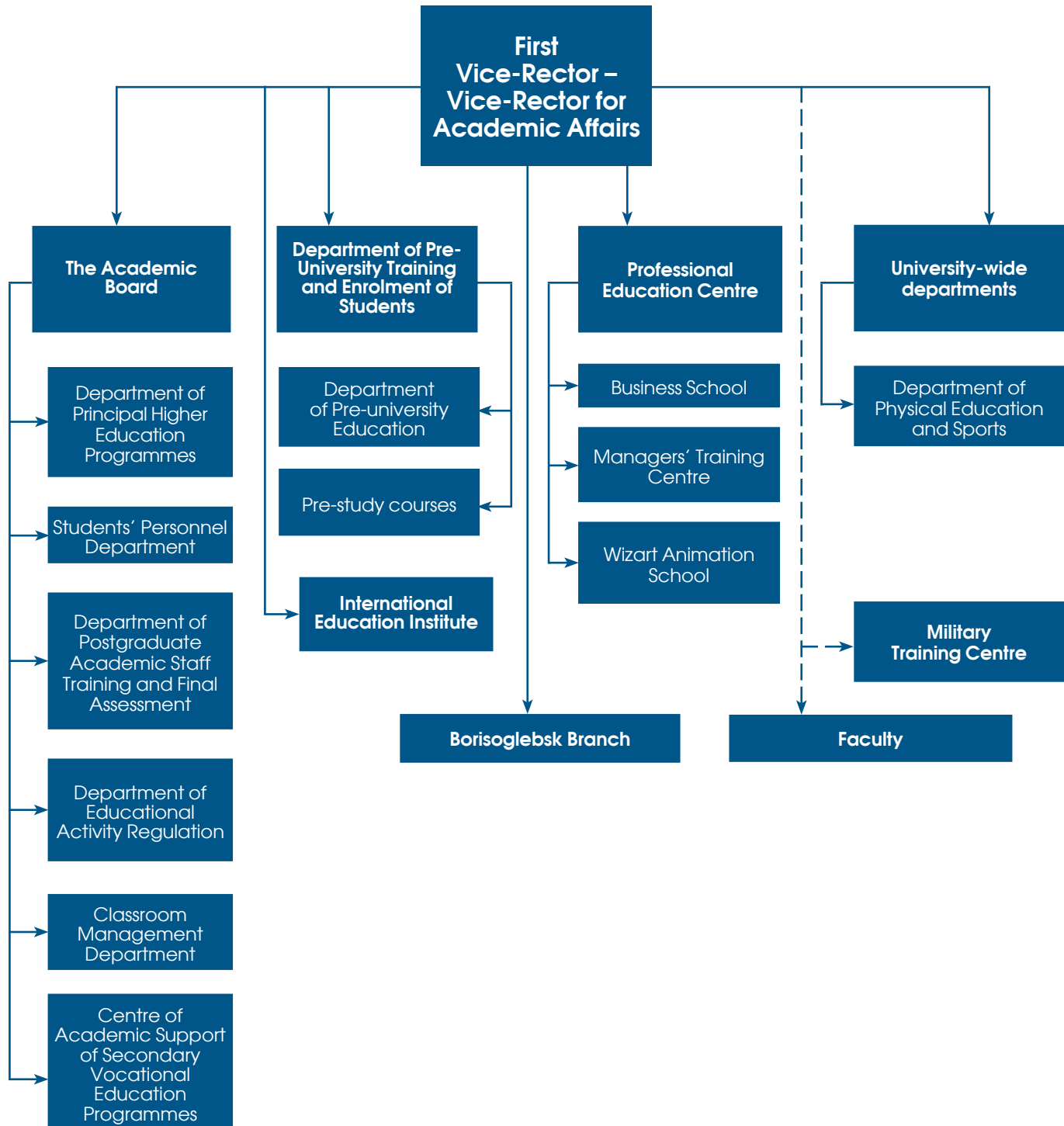




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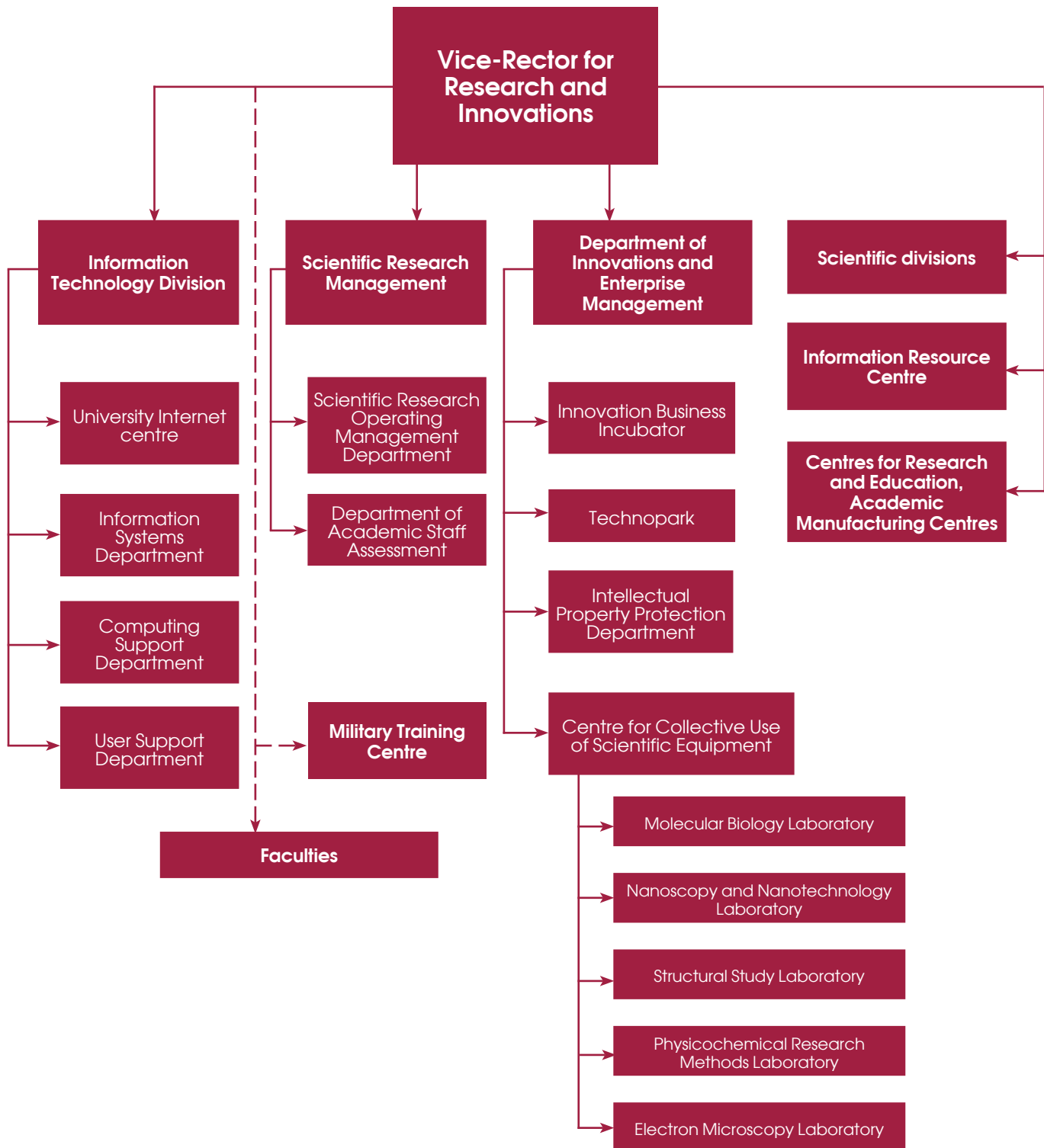


## 2.5. MANAGEMENT STRUCTURE OF THE FIRST VICE-RECTOR – VICE-RECTOR FOR ACADEMIC AFFAIRS



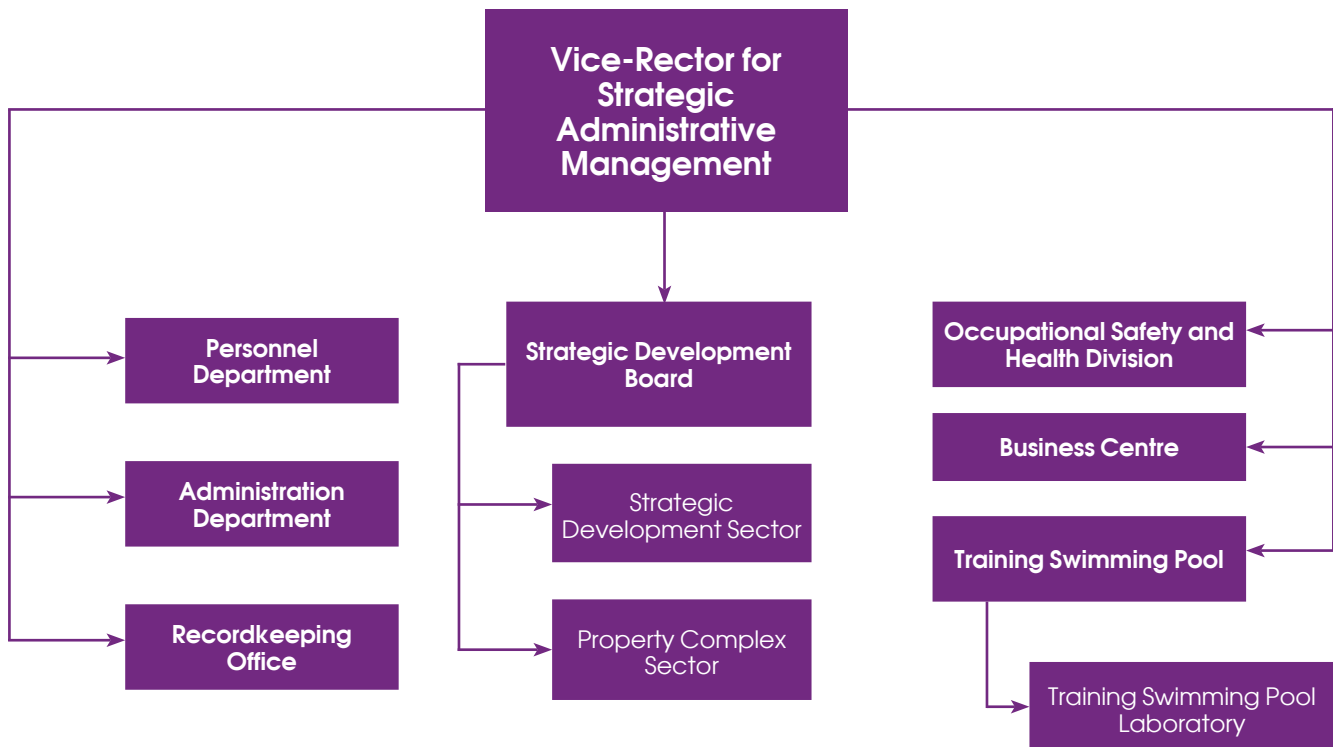


## 2.6. MANAGEMENT STRUCTURE OF THE VICE-RECTOR FOR RESEARCH AND INNOVATIONS



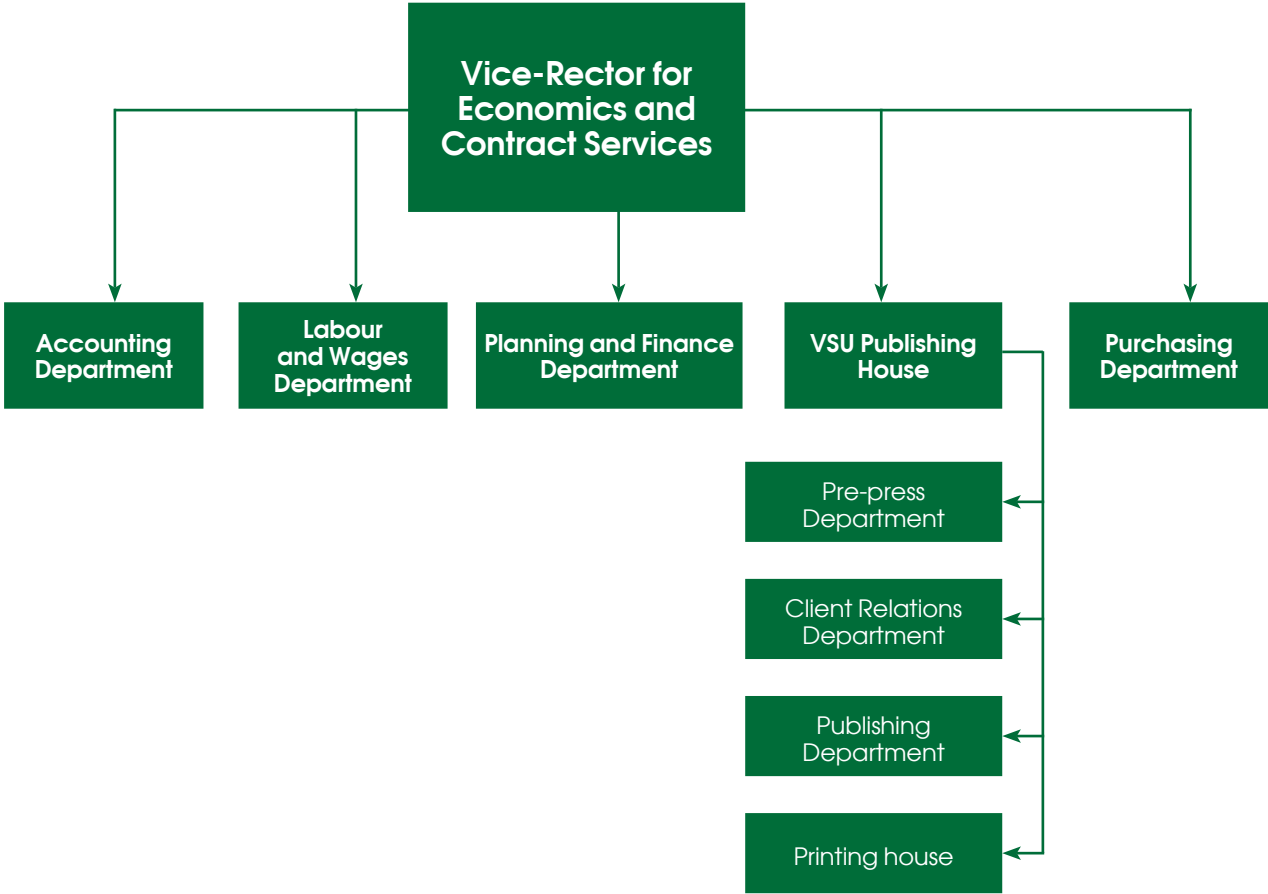


## 2.7. MANAGEMENT STRUCTURE OF THE VICE-RECTOR FOR STRATEGIC ADMINISTRATIVA MANAGEMENT



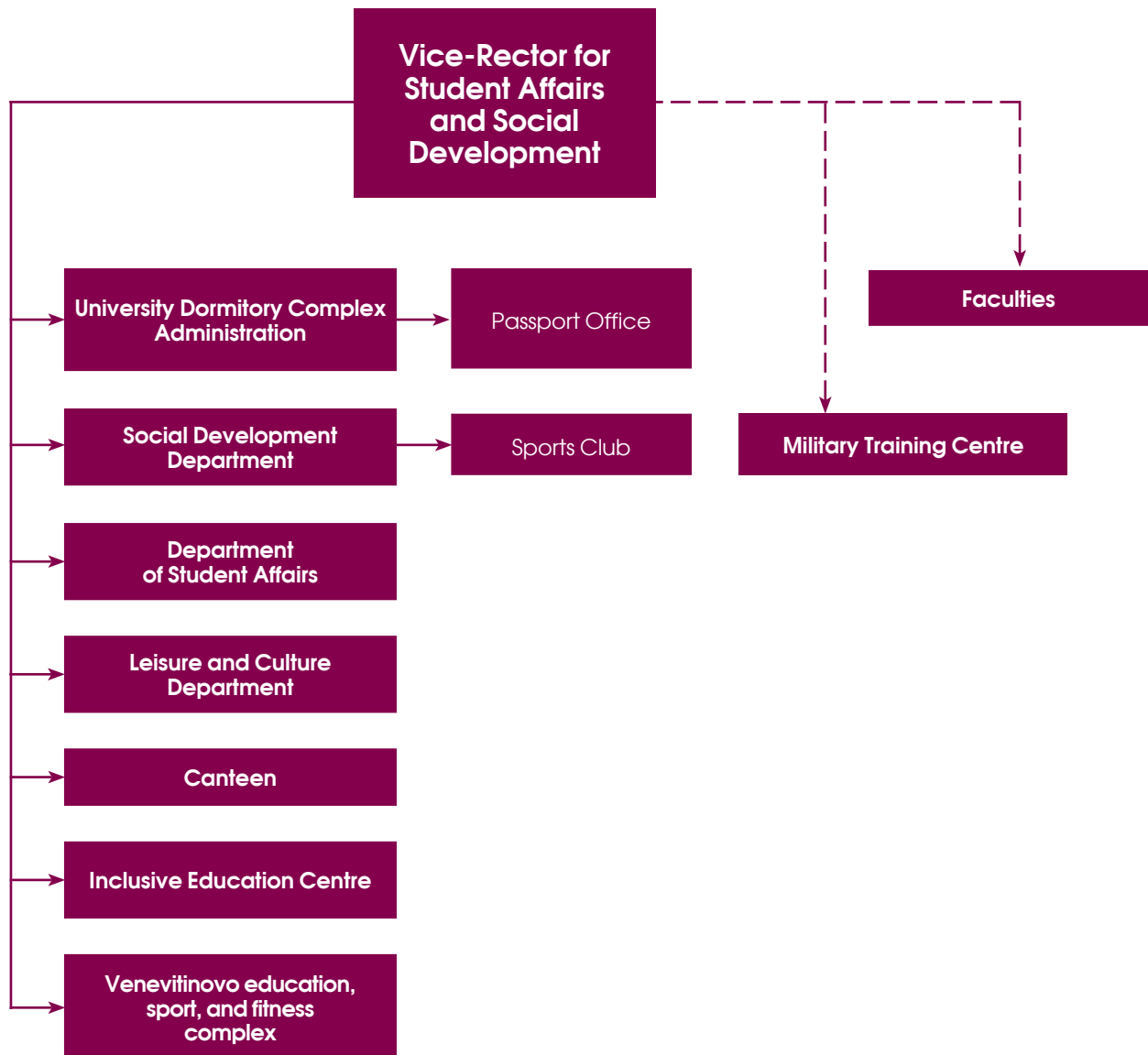


## 2.8. MANAGEMENT STRUCTURE OF THE VICE-RECTOR FOR ECONOMICS AND CONTRACT SERVICES



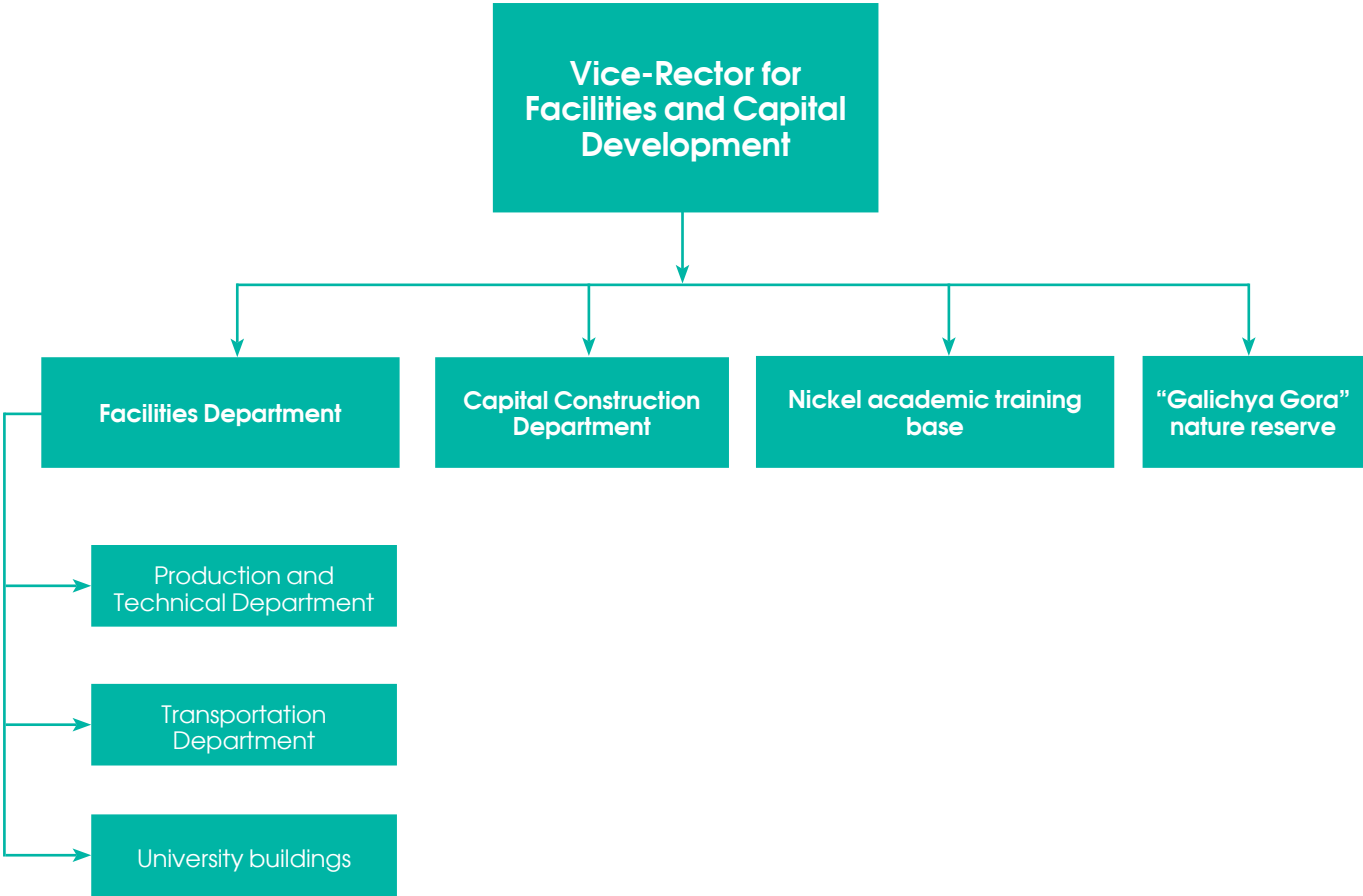


## 2.9. MANAGEMENT STRUCTURE OF THE VICE-RECTOR FOR STUDENT AFFAIRS AND SOCIAL DEVELOPMENT





## 2.10. MANAGEMENT STRUCTURE OF THE VICE RECTOR FOR FACILITIES AND CAPITAL DEVELOPMENT





## 2.11. FACULTIES AND INSTITUTES

### FACULTY OF GEOLOGY

Dean **Viktor NENAKHOV**

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

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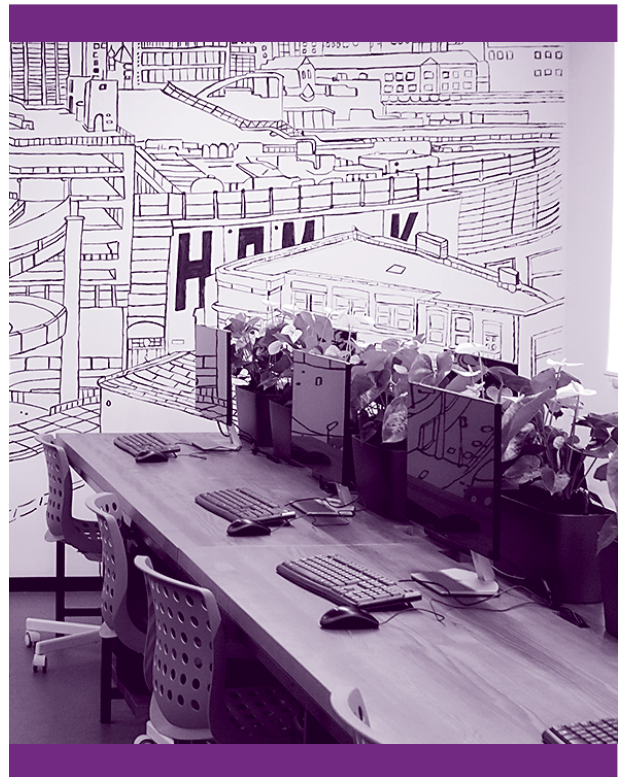
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# UNIVERSITY STRATEGIC DEVELOPMENT





# UNIVERSITY STRATEGIC DEVELOPMENT



**Yuriy Bubnov,**

Vice Rector for Strategic  
Administrative Management

## 3.1. VSU STRATEGY

The university's strategic development is carried out in accordance with the following policy documents:

- The revised VSU Strategy (approved by the Academic Council until 2030, Record No. 7 of 29 September 2017).
- The Programme of VSU's transformation into Voronezh Regional University Centre for Innovative, Technological, and Social Development (approved on 26 September 2017; the status obtained on 14 December 2017).
- The "road map" of events aimed at VSU's transformation into Voronezh Regional University Centre, as well as meeting the target performance indicators (as part of the Transformation Programme).
- VSU Project Map (revised annually).

**The mission of VSU** as a leading classical university is to make a valuable contribution to national and regional development, drawing upon the best traditions of the national system of education, and combining the scientific, humanitarian, and social knowledge, advanced fundamental and applied research, high innovative potential, and integration with international research and the educational framework. VSU positions itself as a scientific, technological, educational, innovative, and cultural centre that trains highly-qualified and eminently employable specialists.

The University's Strategic Aim is to retain and strengthen its leadership in the Central Black Earth Region and among the leading Russian universities in all areas of activity.



## TASKS AND EVENTS AS PART OF VSU STRATEGY

### 1. Modernizing Higher Education Academic Programmes:

- Implementing internationally competitive academic programmes in Biomedicine, Physics, Chemistry, Earth Sciences, Computer Sciences, and Social Sciences.
- Expanding the number and range of academic exchange and double-degree programmes.
- Opening new academic programmes for English-speaking students.
- Introducing social and technology-oriented entrepreneurship modules into the academic programmes.
- Increasing the number of fundamental departments and disciplines with the participation of potential employers.

### 2. Developing further education programmes:

- Opening new university-based corporate training centres.
- Developing internationally competitive business education programmes.
- Opening new social and technology-oriented entrepreneurship programmes.
- Implementing further education programmes through the University's Electronic Education System.
- Collaborating with organizations working in the area of employment assistance and entrepreneurship development.

In 2019, 14 new further education programmes were started, two of which were in collaboration with large enterprises (Yandex and Samsung).

### 3. Intensifying pre-university training and social work:

- Supporting and developing student and graduate communities.
- Implementing educational projects for schoolchildren and the general public.
- Identifying, supporting, and attracting talented students to study at VSU.
- Implementing social projects and initiatives.

### 4. Enhancing research output:

- Supporting the grant and research activities of the university's scholars.
- Increasing the university's participation in international research projects.
- Collaborating with the business community to take part in innovative technological projects.
- Organizational and informational support of the scholars' academic mobility.



#### **5. Integrating with the regional system of innovative development:**

- Collaborating with regional and federal institutions for innovative development.
- Promoting the university as the core of the regional expert community.
- Introducing the elements necessary to pre-accelerate and accelerate innovations.
- Developing the student business communities.
- Promoting university-based small innovative enterprises.
- Expanding the number and scale of innovation facilities.
- Supporting initiatives aimed at expanding the information infrastructure of innovative development.

#### **6. Growing the university personnel's motivation and competencies:**

- Continuous improvement of the criteria of an effective contract for faculty members and senior management.
- Hiring leading Russian and international researchers and lecturers.
- Supporting young scholars and lecturers and aiding in their professional development.

The tasks and event of 2017–2019 strategic development are detailed in the Programme of VSU's transformation into Voronezh Regional University Centre for Innovative, Technological, and Social Development.

### **3.2. ACHIEVEMENT OF TARGET PARAMETERS IN 2019**

VSU Strategy, approved by the Academic Council on 29 September 2017, sets the university's development indicators until 2030. Table 3.1 presents the key performance indices in the reporting year of 2019 compared to 2018, as well as those planned for 2020.

Table 3.1

## KEY INDICATORS OF VSU'S DEVELOPMENT IN 2019

Type	2018 (fact)	2019 (fact)	2019 (plan)
<b>Educational activity</b>			
The number of students enrolled in bachelor's, diploma, and master's degree programmes	17,289	17,532	18,100
The total number of postgraduate students	634	558	580
The percentage of students in master's degree and postgraduate programmes in the total number of the given contingent, %	20.0	18.0	21.0
The percentage of international students enrolled in bachelor's, specialist's, and master's degree programmes, in the given contingent, %	3.4	3.84	6.1
The percentage of international postgraduate students, %	11.8	11.8	10.5
The number of international exchange students spending at least one semester at VSU, per 100 students of the given contingent	0.49	0.56	2.0
The number of winners of national and international academic contests who enrolled in full-time bachelor's degree and diploma degree (specialist) study programmes	1	1	3
<b>Scientific Research and Innovative Activity</b>			
The total amount of R&D in the reporting year, million roubles	282.4	293.5	270.0
Income from R&D per faculty member, thousand roubles	188.9	199.0	195.4
Total amount obtained in the reporting year from the Russian state foundations supporting scientific and technical research and innovations, million roubles	84.9	121.8 <sup>1</sup>	90.0
The number of publications in Web of Science in the reporting year per 100 academic staff members	21.07	24.34	20.6
The number of publications in Scopus in the reporting year per 100 academic staff members	26.89	31.25	28.9
The number of citations of the publications issued in the last five years, indexed in Web of Science in the same period	2564	2777	2400
The number of citations of publications issued in the last five years, indexed in Scopus in the same period	3150	3525	3050
The number of publications made in collaboration with foreign scholars, according to Web of Science and Scopus, in the reporting year	83	85	75
The number of doctoral and PhD dissertations defended at VSU dissertation boards	101	94	130
<b>University staff members</b>			
The total number of the regular FTE staff members as of the end of the reporting period	1408	1409	1282
The total number of regular academic staff members as of the end of the reporting period	87	66	100
The share of the academic staff members having a PhD or a DSc degree, %	75.0	75.14	77.0
The share of foreign citizens as a percentage of the total number of academic staff members, %	0.07	0.07	0.5
The number of academic staff members who are foreign citizens	1	1	7

<sup>1</sup> Russian Science Foundation – 66.6 million roubles; Russian Foundation for Basic Research – 55.2 million roubles, including individuals – 44.7 million roubles, legal entities – 10.5 million roubles.

Abbreviations: R&D – research and development, FTE – Full Time Equivalent

Notes: Web of Science and Scopus are the two most influential databases used internationally to assess research output.

It should be noted that there was a significant reduction in the total number of regular academic staff members as of the end of the reporting year, which is indicative of a decrease in the number of grants obtained by our faculty members (possible reasons: low interest in this kind of work, increasingly complicated procedures of obtaining grants, a decrease in our employees' qualifications).



### 3.3. “UNIVERSITIES AS CENTRES FOR INNOVATIONS” PROJECT

2019 saw the successful completion of the project for transforming VSU into the centre for innovative, technological, and social development of the region. Despite the lack of federal funding, over the three years of implementation, all the key initiatives of the project were realized.

1. New executive education centres were established:
  - A robotics laboratory in collaboration with INTEKHROS.
  - A master’s degree programme in Banking Support of Contracts in collaboration with Dom.RF.
  - Machine learning and data analysis laboratory in collaboration with Novolipetsk Steel (NLMK Group).
2. The first regional university innovation preaccelerator “The League of Innovations” was started.

“The League of Innovations” has been working at Voronezh State University since 2017. In the first year, about 100 schoolchildren of Voronezh and the Voronezh Region became participants of the project, and 71% of them went on to become students of Voronezh State University. “League of Innovations 3.0” is a socially significant project aimed at forming basic competencies in the field of scientific and innovative activity among schoolchildren, which allows for the implementation of social and technological programmes and leadership projects in the Voronezh Region. Over the three years of its implementation, more than 500 people have taken part in the project.
3. VSU became part of the regional import substitution programme.
4. The “VSU Atlas of Innovations” was created.
5. The VSU Endowment Fund was included in the university’s project work.
6. University rebranding was carried out.



In 2018, Voronezh State University celebrated its 100th anniversary. Prior to the anniversary, a new brand style for the university was developed.

The new brand style was presented to the members of the organisation committee for the 100th anniversary and the members of the Board of Trustees at a session of VSU Academic Board and was unanimously approved by their members.

The new logo and brand style were developed by Red Collar, one of the leading Russian digital agencies.

The developed logo has not abolished the official coat of arms of the university and has not diminished its significance. The coat of arms is an emblem to which heraldic rules apply. It is a part of the university's heritage. The new logo retains the image of the coat of arms, which is a historical symbol of the university. The image looks like a shield, the upper part of which symbolises the open book of knowledge. In the centre, there are three keys which open the doors to the sanctuary of sciences. The key bits embody a variety of faculties – there are many keys to different areas of knowledge. The form of the middle key resembles the outlines of the main building of VSU and that explains the central position of the key.

7. The innovation infrastructure was developed.
8. Coordinating strategic projects in the Voronezh Region is being carried out.

With the support of the government of the Voronezh Region, a regional project office was opened in Voronezh. Employees of Voronezh State University, in collaboration with the Voronezh Region Economic Development Department, developed the Strategy for Social and Economic Development for the Voronezh Region until 2035, adopted by the Voronezh Regional Duma, as part of Section 4, "Main Directions for the Development of Human Capital and the Social Matters of the Voronezh Region".

Also, in 2018, Strategy for the socio-economic development of the Voronezh Municipal Government until 2035 was developed.



### 3.4. 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 POSITIONS IN NATIONAL AND INTERNATIONAL RANKINGS

Name of the ranking	2019*
Interfax National University Rating:	24
Education	18
Research	48
Socialisation	30
Internationalization	48
Brand	25
Innovations	61-62
Forbes university rating	100
Russian universities' inventive activity rating ("Expert RA")	38-42
Expert RA Rating of Russian Universities	42
Education quality	44
Employers' demand for graduates	65
Research	28
Final ranking of "entrepreneurial" universities of the <i>Expert</i> analytical centre	36
Ranking of most demanded universities of the Russian Federation: classical universities (Social navigator "Rossiya Segodnya")	42
Ranking of classical universities "National Recognition": best universities – 2019	10
Top Russian universities, according to Vladimir Potanin Foundation	15
Progress Ranking of Top Russian universities, according to Vladimir Potanin Foundation	29
International ranking "Three university missions"	1,001-1,100
Ranking of Russian universities by the salaries of young specialists, according to Superjob:	
economic universities	18
law universities	9
Top 100 list of Russian universities – 2018	27
Ranking of English internet resources of Russian universities – 2019	22
Academic Ranking of World Universities (ARWU)	1,001+
Quacquarelli Symonds (QS) World University Ranking	801-1,000
Quacquarelli Symonds (QS): BRICS	139
Quacquarelli Symonds (QS): Emerging Europe & Central Asia	145
The best Universities in Eurasia	61-70
Times Higher Education (THE) World University Ranking	1,001+
Times Higher Education (THE) World University Ranking by subject: physical sciences	801+



End of table 3.2

Name of the ranking	2019*
Times Higher Education (THE) BRICS & Emerging Economies University Rankings	351+
Times Higher Education (THE) Best Universities in Europe	412
Times Higher Education (THE) University Impact Rankings:	101– 200
Good Health and Wellbeing	301+
Quality Education	201-300
Gender Equality	201-300
Decent Work and Economic Growth	=16
Industry, Innovation and Infrastructure	101-200
Reduced Inequalities	101-200
Sustainable Cities and Communities	101-200
Responsible Consumption and Production	=99
Climate Action	100-200
Peace, Justice and Strong Institutions	=47
Partnership for the Goals	201-300
SCImago Institutions Ranking (SIR)	741
University Ranking by Academic Performance (URAP)	2,235 (RF: 26)
Webometrics Ranking of World Universities	2,073 (RF: 26)
Webometrics Transparent Ranking: Top Universities by Google Scholar Citations	2,659 (RF: 30)
UniRank World Universities	1,969 (RF: 30)
Round University Ranking (RUR):	720 (RF: 42)
Life Sciences	527 (RF: 21)
Medical Sciences	491 (RF: 20)
Natural Sciences	599 (RF: 41)
Social Sciences	586 (RF: 30)
Humanities	502 (RF: 29)
Technical Sciences	532 (RF: 23)
Round University Ranking (RUR) Reputation Ranking	619 (RF: 13)
Round University Ranking (RUR) Academic Ranking	731 (RF: 36)
UI GreenMetric World University Ranking	223 (RF: 5)
Academic Ranking of World Universities – European Standard (ARES)	A+
Worldwide Professional University Ranking (RankPro)	492 (RF: 20)
U-Multirank (CHE / CHEPS / CWTS Consortium)	+

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



### 3.5. INFORMATION ON PASSING THE UNIVERSITY EFFICIENCY MONITORING

The Ministry of Education and Science of the Russian Federation conducts annual monitoring of the performance of higher education institutions with the purpose of exercising systematic, standardized control of the state of education and the dynamics of changes in its results and conditions. As a result of the performance monitoring, Voronezh State University was included in the group of institutes that achieved at least 4 performance indicators (Table 3.3, Fig. 3.1).

Table 3.3

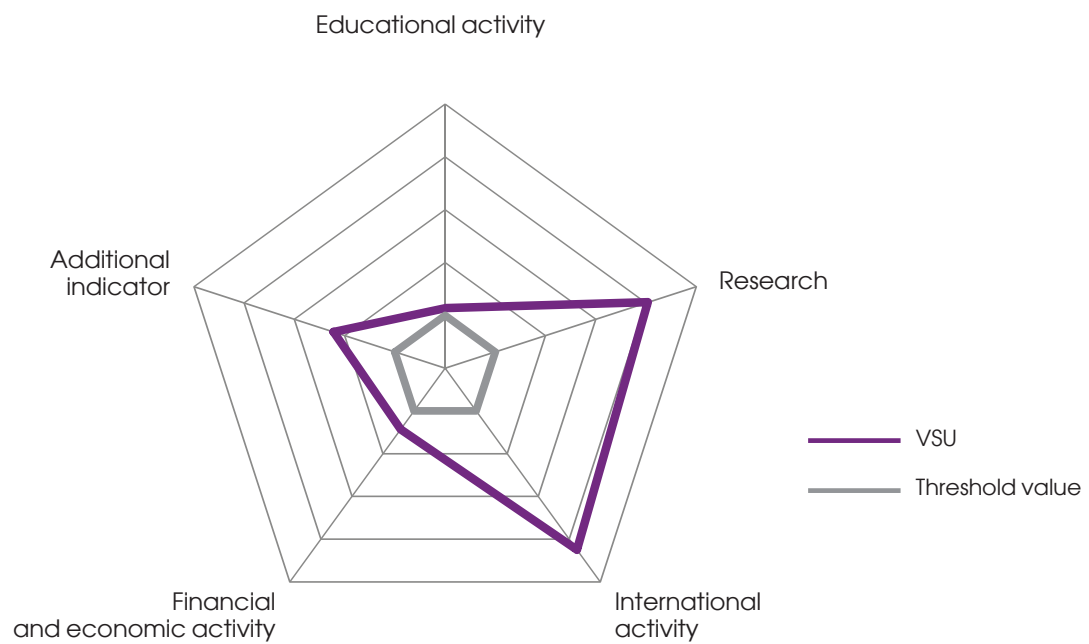
#### VSU'S POSITION ON KEY EFFICIENCY MONITORING INDICATORS COMPARED TO THE THRESHOLD VALUES

Item number	Indicator title	Values	Threshold value	Prior Year Adjustment
E.1	Educational activity	68.27	60	+1.6% to 67.21
E.2	Research	207.04	51.28	+25.32% to 165.21
E.3	International activity	4.25	1	+9.25% to 3.89
E.4	Financial and economic activity	1898.9	1327.57	+9.05% to 1,741.35
E.5	Salary of the academic staff members:	176.52	Not evaluated	-0.97% to 182.31
E.6	Employment	Not evaluated	70	-
E.8	Additional indicator	6.17	2.78	+8.63% to 5.68



Figure 3.1

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



Passing the performance monitoring demonstrates the high quality of student training and the efficiency of innovative and research activities.



### 3.6. HUMAN RESOURCES

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

- Ensuring the required number of academic, educational support, and administrative personnel.
- Creating the conditions necessary for the personal fulfilment and professional development of all employees.
- Supporting young scholars and postgraduate students.
- Supporting initiatives in the area of education.
- Raising the university employees' motivation and commitment levels.
- Creating a continuous system of professional development and improvement of the mechanisms for organizing professional retraining and advanced training of university employees.
- Forming the university's personnel reserve and making efficient use of it.
- Introducing methods for university talent management using information technologies and automated systems.
- Creating a psychologically comfortable environment in the workplace.

Key quantitative characteristics of the university's staff members supply as of 31 December 2019 (figures 3.2, 3.3):

■ Total number of employees	<b>2,939 people</b>
Of them:	
■ Academic staff	<b>1,473 people</b>
■ Educational support personnel	<b>707 people</b>
■ Scientific and engineering personnel	<b>203 people</b>
■ Operating personnel	<b>254 people</b>
■ Administrative and managerial staff	<b>302 people</b>



Figure 3.2

TOTAL NUMBER OF STAFF MEMBERS IN 2017-2019

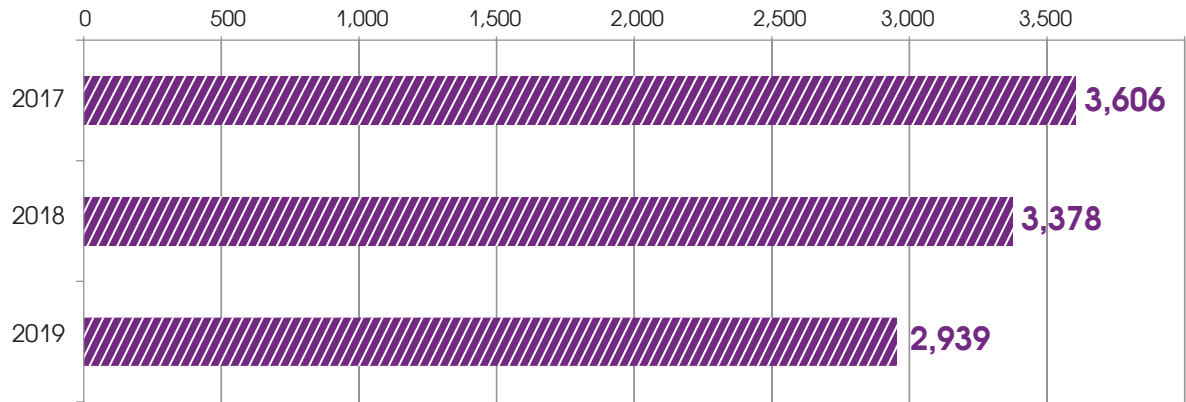
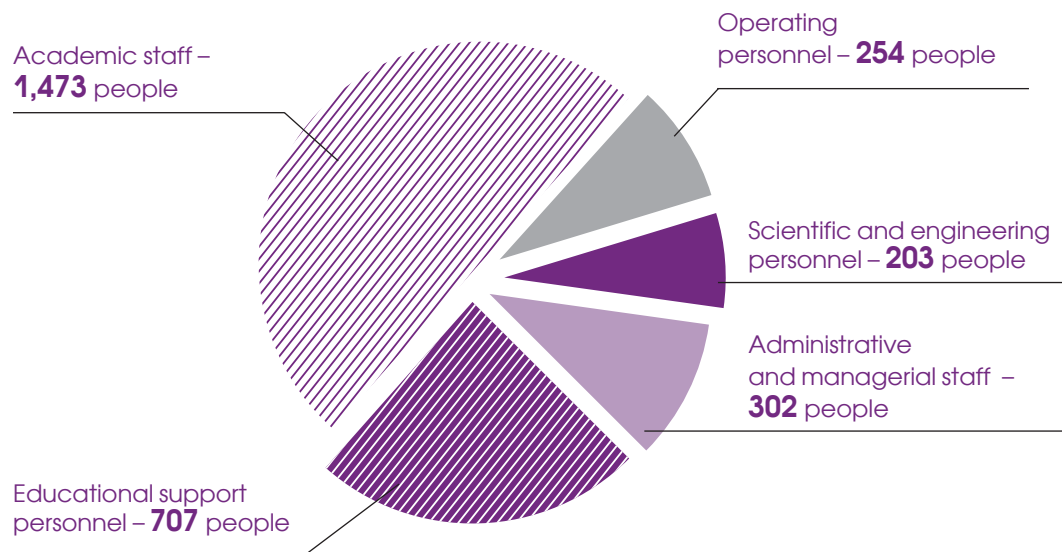


Figure 3.3

COMPARISON OF THE NUMBERS OF STAFF MEMBERS BY FUNCTION IN 2019





Quantitative and qualitative indicator dynamics in the university staff composition in total in 2017-2019 is shown in Table 3.4.

Table 3.4

NUMBER AND COMPOSITION OF THE UNIVERSITY PERSONNEL IN 2017-2019

The university staff composition	2017	2018	2019
<b>Total number of employees</b>	<b>3,606</b>	<b>3,378</b>	<b>2,939</b>
<b>Academic staff</b>	1,532	1,510	1,473
Including: total number of staff with a degree	1,150	1,134	1,102
DSc	306	300	293
PhD	844	834	809
<b>Educational support personnel</b>	778	748	707
<b>Administrative and managerial personnel</b>	308	301	302
<b>Scientific and engineering personnel</b>	198	219	203
<b>Operating personnel</b>	790	600	254

The analysis of the composition of the university staff demonstrates that 74.8 % of the total number of the academic staff members have an academic degree (1,102 people). There are 293 staff members with a DSc degree (20 %). The results of the academic staff numbers are shown in Figures 3.4–3.8 and in Tables 3.5–3.8.



Figure 3.4

THE COMPARISON OF THE NUMBERS OF ACADEMIC STAFF MEMBERS IN 2017-2019

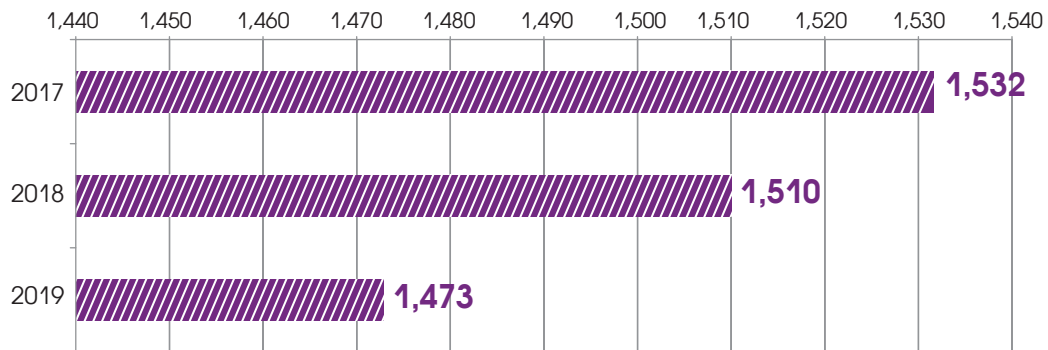


Figure 3.5

THE DISTRIBUTION OF THE ACADEMIC STAFF BY POST AS OF 1 JANUARY 2020

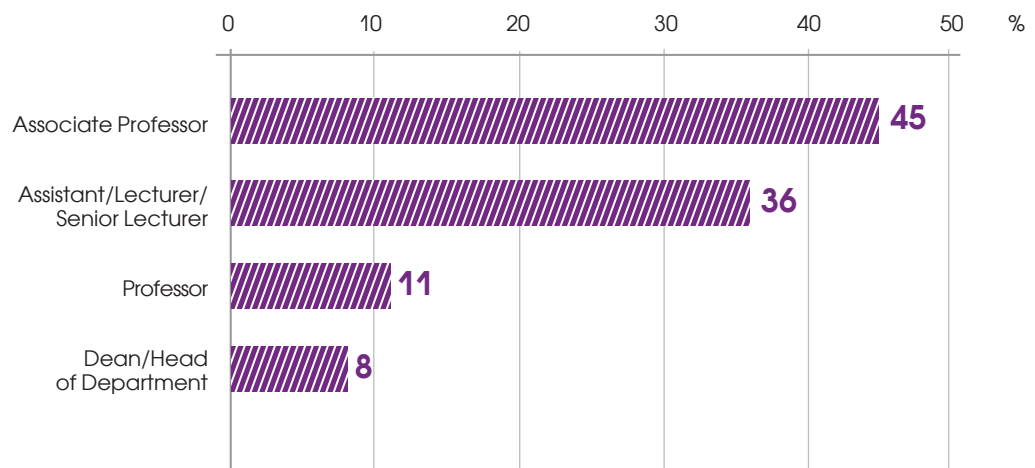


Figure 3.6

DISTRIBUTION OF ACADEMIC STAFF NUMBERS BY DEGREE

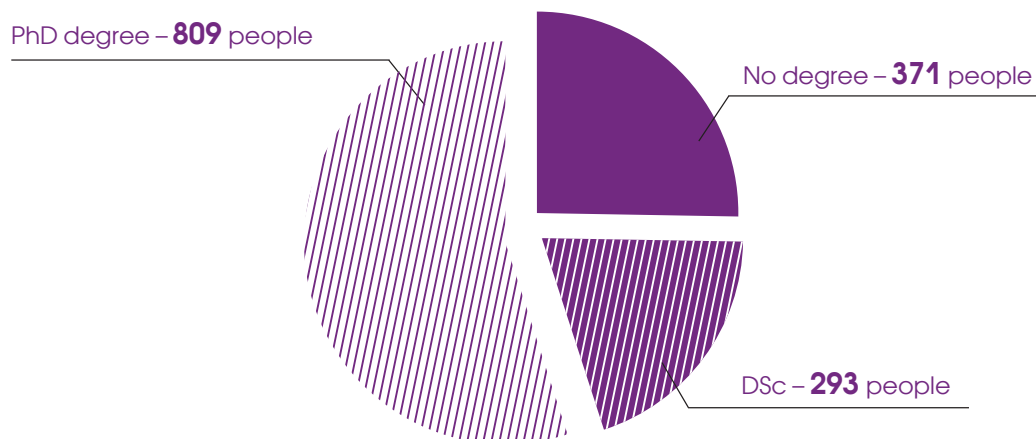




Figure 3.7

THE NUMBER OF ACADEMIC STAFF MEMBERS OF FACULTIES, INSTITUTES, AND UNIVERSITY-WIDE DEPARTMENTS AS OF 1 JANUARY 2020

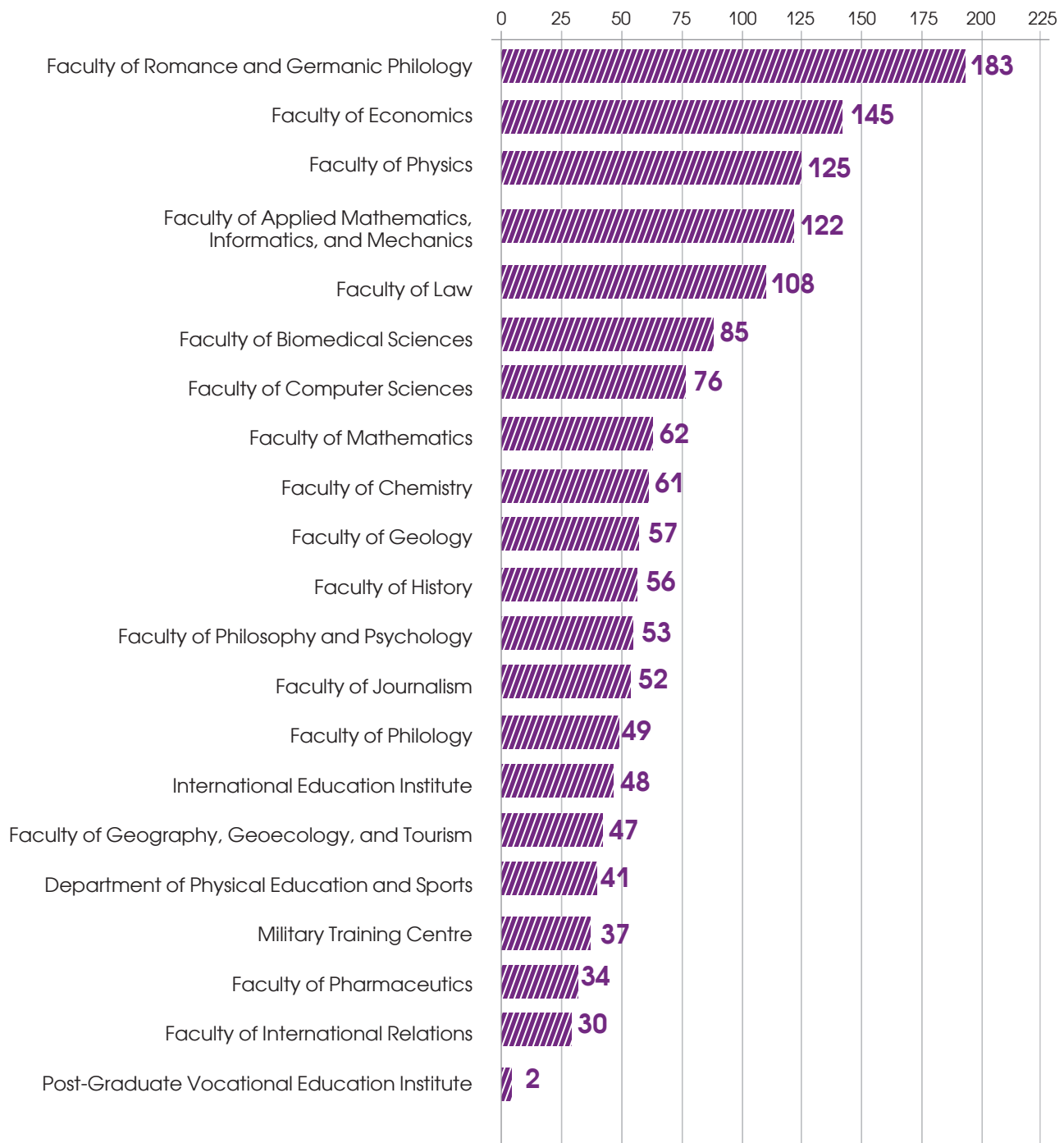




Figure 3.8

## COMPARISON OF THE NUMBERS OF ACADEMIC STAFF MEMBERS, WORKING FULL-TIME AND PART-TIME IN 2019

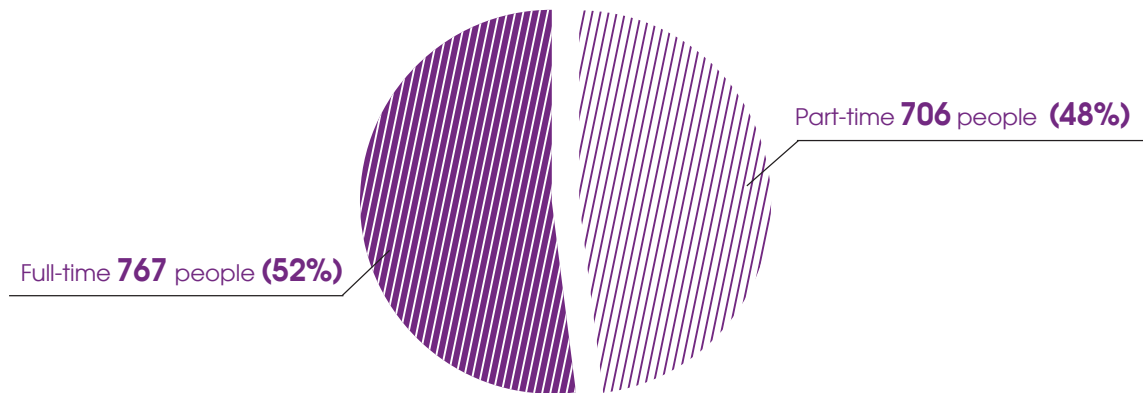


Table 3.5

## THE NUMBER OF ACADEMIC STAFF MEMBERS OF FACULTIES, INSTITUTES, AND UNIVERSITY-WIDE DEPARTMENTS AS OF 1 JANUARY 2019

Structural subdivision	The number of academic staff members	
	Total	Full-time
Military Training Centre	37	35
Faculty of Geology	57	11
Post-Graduate Vocational Education Institute	2	—
International Education Institute	48	47
Faculty of History	56	26
Department of Physical Education and Sports	41	37
Faculty of Mathematics	62	22
Faculty of Biomedical Sciences	85	46
Faculty of Geography, Geoecology, and Tourism	47	24
Faculty of Journalism	52	28
Faculty of Computer Sciences	76	35
Faculty of International Relations	30	17
Faculty of Applied Mathematics, Informatics, and Mechanics	122	52
Faculty of Romance and Germanic Philology	183	100
Faculty of Philosophy and Psychology	53	25
Faculty of Pharmaceutics	34	25
Faculty of Physics	125	46
Faculty of Philology	49	14
Faculty of Chemistry	61	19
Faculty of Economics	145	84
Faculty of Law	108	74
<b>Total</b>	<b>1,473</b>	<b>767</b>



Table 3.6

THE 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	PhD, %	DSc, %
Military Training Centre	37	8.1	0.0
Faculty of Geology	57	63.2	24.6
Post-Graduate Vocational Education Institute	2	50.0	0.0
International Education Institute	48	41.7	2.1
Faculty of History	56	64.3	26.8
Department of Physical Education and Sports	41	4.9	0.0
Faculty of Mathematics	62	56.5	25.8
Faculty of Biomedical Sciences	85	62.4	25.9
Faculty of Geography, Geoecology, and Tourism	47	63.8	17.0
Faculty of Journalism	52	67.3	15.4
Faculty of Computer Sciences	76	51.3	19.7
Faculty of International Relations	30	70.0	20.0
Faculty of Applied Mathematics, Informatics, and Mechanics	122	54.1	23.0
Faculty of Romance and Germanic Philology	183	50.8	9.3
Faculty of Philosophy and Psychology	53	54.7	24.5
Faculty of Pharmaceutics	34	47.1	11.8
Faculty of Physics	125	61.6	28.8
Faculty of Philology	49	65.3	24.5
Faculty of Chemistry	61	49.2	47.5
Faculty of Economics	145	60.0	19.3
Faculty of Law	108	63.0	19.4

Table 3.7

AGE AND ACADEMIC DEGREE OF THE ACADEMIC STAFF MEMBERS

Degree	Age				
	Total	under 35	36 to 50	51 to 70	over 70
<b>Total</b>	<b>1,473</b>	<b>310</b>	<b>542</b>	<b>455</b>	<b>166</b>
Among them:					
Have a DSc degree	293	2	57	158	76
Have a PhD degree	809	154	372	209	74

Table 3.8

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

Structural subdivision	2017		2018		2019	
	Total number of people	average age, years	Total number of people	average age, years	Total number of people	average age, years
Military Training Centre	30	51	33	50	37	51
Faculty of Geology	64	51	58	50	57	52
Post-Graduate Vocational Education Institute	2	55	2	56	2	57
International Education Institute	45	48	42	50	48	46
Faculty of History	61	49	59	49	56	50.7
Department of Physical Education and Sports	41	48	40	50	41	50
Faculty of Mathematics	64	52	62	51	62	52.3
Faculty of Biomedical Sciences	80	49	81	48	85	49.7
Faculty of Geography, Geoecology, and Tourism	51	49	47	49	47	48.7
Faculty of Journalism	54	50	53	50	52	49.3
Faculty of Computer Sciences	69	47	72	47	76	46.5
Faculty of International Relations	30	45	31	45	30	45.7
Faculty of Applied Mathematics, Informatics, and Mechanics	127	47	126	48	122	49.5
Faculty of Romance and Germanic Philology	197	45	200	46	183	47.3
Faculty of Philosophy and Psychology	52	48	51	50	53	49.9
Faculty of Pharmaceutics	37	46	37	42	34	41.6
Faculty of Physics	129	54	126	55	125	54.5
Faculty of Philology	64	50	58	51	49	53.9
Faculty of Chemistry	63	53	62	53	61	52.8
Faculty of Economics	158	48	152	48	145	48.8
Faculty of Law	108	45	109	45	108	46.2

The analysis of the age of the academic staff members in 2017-2019 demonstrates that the average age of the academic staff members in the university as a whole is:

- As of 31 December 2017, 49.0, whereas the percentage of employees at retirement age is 32.5 %.
- As of 31 December 2018, 49.0, whereas the percentage of employees at retirement age is 32.3 %.
- As of 31 December 2019, 49.4, whereas the percentage of employees at retirement age is 31.0 %.



### 3.7. INFORMATION ON RENTAL TRANSACTIONS

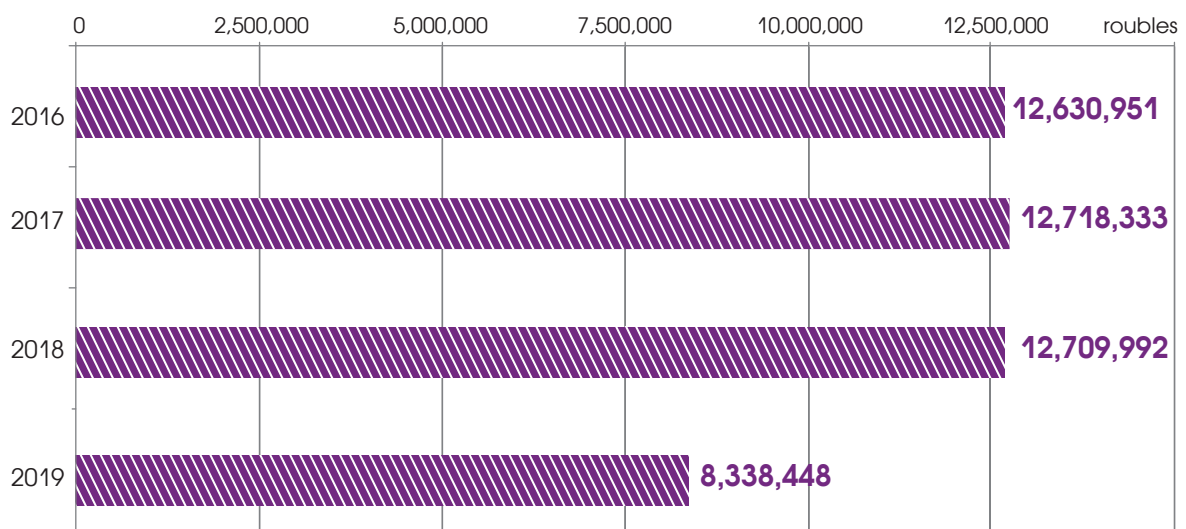
In 2019, the Strategic Development Board continued the lend-lease of the training facility premises not used in the academic process, in order to create comfortable conditions for students and university employees, optimize the property assets, and attract additional extra-budgetary funding.

Over the past year, 15 projects were approved by the Russian Ministry of Education and Science and the Federal Property Management Agency in the Voronezh Region, and another three applications are currently being reviewed by the Russian Ministry of Education and Science.

The income from federal real estate for the reporting period amounted to 8,338,448 roubles, which is lower than in previous years due to the termination of two contracts (Fig. 3.9).

Figure 3.9

#### INCOME FROM PROPERTY ASSETS IN THE LAST FOUR YEARS



The funds obtained are used both for property asset maintenance and for improving the university's facilities and infrastructure.

Thus, the university is developing its rental activities, taking into account the needs of students and university employees, exercising permanent control over the quality of goods and services provided by the tenants and striving to make effective use of the areas not used in the educational process in full accordance with the current regulatory framework. In 2020, there are plans to implement the approved federal real estate lease projects, significantly increasing the income.

### 3.8. 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:

- Voronezh State University.
- VSU Alumni Association.
- Alexander A. Sokolov, Vice Rector for Building Operation and Capital Development, member of the Board of Trustees of VSU.
- Gennady V. Chernushkin, Founder of Angstrom Group, member of the Board of Trustees of VSU.

#### The Fund Management Board:

- Dmitry A. Yendovitsky, Chairperson, Rector of Voronezh State University.
- Evelina P. Domashevskaya, Head of the Department of Solid-State Physics and Nanostructures of VSU.
- Olga Uryvskaya – Chief Accountant of VSU.
- Gennadiy V. Chernushkin, Founder of Angstrom Group.

#### The Fund's Board of Trustees:

- Alexandra V. Glukhova, Head of the Department of Sociology and Politology.
- Dmitriy R. Lapygin, Director of Economic Affairs of OOO RET.
- Nadezhda Mazalova – General Director of OOO *Region-Terminal*, VSU graduate.
- Andrey Markov – Deputy of the State Duma of the Federal Assembly of Russian Federation, VSU graduate.
- Sergey V. Sokolinsky – Head of the Voronezh regional division of the Association of young businessmen.
- Evgeniy V. Yurchenko, Chairman of *A.S. Popov Investment Fund*.

#### Director of the VSU Endowment Fund

- Alexander A. Sokolov, Vice Rector for Building Operation and Capital Development.

The endowment assets are under trust in OAO *Gazprombank – Asset Management*.

The mission of the Foundation is to bring together graduates, as well as other interested parties, in order to solve the university's top-priority tasks, which are primarily related to supporting those involved in the development of the university.

The Fund Management Board decided to spend the revenue on the following measures:

- Providing grants to young scholars; covering their research and internship costs.
- Providing grants to VSU's leading scientists.
- Personalized retirement benefits to VSU's outstanding lecturers and scholars.
- 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 VSU’s Botanical Garden, VSU’s biocentre, the “Venevitinovo” recreation facility, and the “Galichya Gora” nature reserve.
- Leisure facilities for VSU students and staff members.
- Enhancement of university facilities.
- Other uses in compliance with the VSU development strategy and the objectives set by the Charter of the Fund.

The market value of the assets constituting the endowment was 29,958.2 thousand roubles, as of the end of 2019.

The revenue from the discretionary management of the VSU Endowment Fund in 2019 was 13.25 %, i.e. 3,524.6 thousand roubles in absolute terms.

The remuneration of “AO Gazprombank – Assets Management” in 2019 was 352.5 roubles.

New donations made in 2019 amounted to 119.9 thousand roubles.

Table 3.9

### VSU ENDOWMENT FUND VALUE AND CONTRIBUTIONS

Parameters	Year					
	2014	2015	2016	2017	2018	2019
Net asset value by the end of the year, thousand roubles	13,378	17,248	18,647	24,294.6	26,386.1	29,958.2
The revenue from discretionary management, thousand roubles	400.144	2,735	1,565	1,850.3	1,721.7	3,524.6
Annual effective yield, %	3.5	22	10.5	11.11	6.72	13.25
Inflation, % (according to the Russian Federal State Statistics Service)	11.4	13	5.4	2.5	4.3	3
Augmentation of the endowment, thousand roubles	376.8	1,617.8	596.7	7,536.3	388.3	119.9
Amount of contribution, thousand roubles	393.667	360.1	707.8	1,404.4	1,850.3	–

The main directions of activity and development of the VSU Endowment Managing Fund are determined by the decisions of the VSU Board of Trustees and the Board of Trustees of the Endowment Fund.

When conducting university events involving the Fund, the emphasis was placed on popularization, transparency of the Fund’s activities aimed at increasing its capital and accordingly, expanding the financial opportunities for the implementation of the main areas of activity.



In 2019, the earnings from the endowment was not spent and was not transferred to the founder. According to the results of 2018, earnings from the endowment were capitalised.

The Fund's strategic objectives for 2020 and the future years remain unchanged and include stimulating the students' scientific, creative and other socially significant initiatives, grant support for talented young people, assistance to our veterans, developing the infrastructure and a comfortable environment for students and university staff.

The key 2020 activities include:

- Redecorating university buildings.
- Redecorating the residence halls.
- Social project contest.
- Convention of student teams of the Voronezh Region.

Voronezh State University will host a two-day convention of student teams of the Voronezh Region. All the participants will be divided into teams, and they will work together throughout the days of the event. For them, trainings, educational lectures, seminars, workshops, and panel discussions will be organized;

- Donor days;

The Donor Day project is aimed at developing a healthy lifestyle and improving the health of young people. It includes two donor campaigns among students held during the academic year, and is aimed at encouraging first-time donors to become regular blood donors. The campaign includes:

- Lectures for future blood donors on the proper preparation for blood donation and the benefits of blood donation.
- Donating blood at a mobile transfusion centre near the university building;

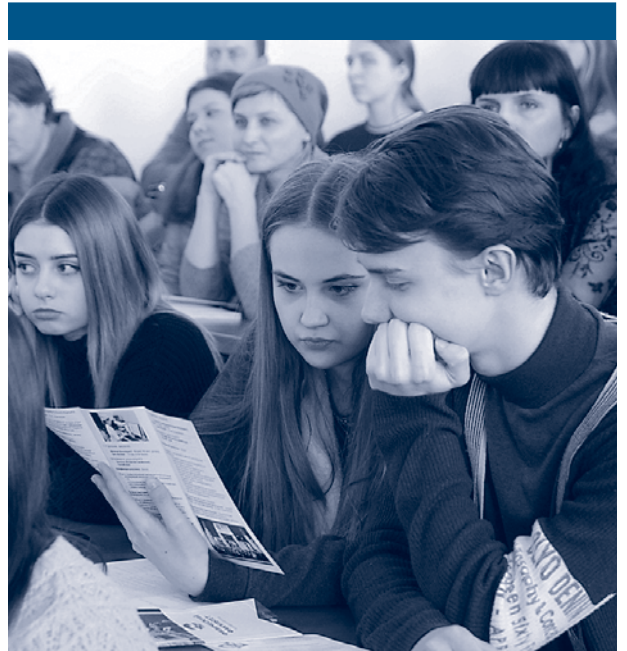
- Creating a student team square.

A 2.6 thousand square metre square will be laid out on Plekhanovskaya Street, from the main building of Voronezh State University to the Literary Museum. It will be a multi-format space reflecting the history of student groups. In 2020, the territory will be landscaped, and in 2021 a monument to the student groups of the Voronezh Region will be erected there. Modern information stands will be installed, telling about the activities of student teams;

- Events dedicated to the 75th anniversary of the Victory.
- Reconstructing the Nickel academic training base.

Current data about the Fund's activity can be found on the Fund's website:

[www.vsu.ru/endowment-fund](http://www.vsu.ru/endowment-fund)







## EDUCATION





## EDUCATION




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

### 4.1. THE MAIN OBJECTIVES OF THE UNIVERSITY ACADEMIC POLICY IN 2018-2019

The university's main aim in the field of the academic policy was to train highly qualified specialists in the top priority areas of the development strategy for the Voronezh Region, Central Black Earth Region, and the Russian Federation.

In order to achieve this aim, the following objectives were set.

1. Anticipatory training of highly qualified professionals and academic staff with due account to the top priority areas and the demands in the Voronezh Region, Central Black Earth Region, and the Russian Federation, which includes:
  - Achieving the target figures in student admissions to the higher education programmes and secondary vocational education programmes.
  - The recruitment of students for programme 14.05.02 "Nuclear Power Stations: Design, Operation, and Engineering" and the expansion of the range of secondary vocational education programmes.
  - The development and implementation of further professional education programmes based on e-learning and distance learning technologies (at least 15 programmes).
2. The development of the university's electronic information educational environment and its integration into the educational environment of the Russian Federation, which includes:
  - Providing more equipment for the MOOC laboratory and the development of at least 10 MOOCs.
  - The automation of the educational process: introduction of an electronic timetable, a program used to create electronic syllabuses, and a program used to keep the electronic records of the educational process (electronic diaries).

- 
3. Establishing a new structural subdivision to implement secondary vocational education programmes.
  4. The introduction of independent quality assessment for higher education programmes through the public and professional accreditation of education programmes.

## 4.2. GENERAL INFORMATION ON TECHNOLOGIES AND MAIN STEPS OF PRE-UNIVERSITY WORK

In the reporting period, VSU's pre-university work was carried out in several key areas.

### I. COLLABORATION WITH OTHER EDUCATIONAL INSTITUTIONS

The collaboration with other educational institutions included:

- active e-mail correspondence with pre-school organisations (4), further education institutions (17), colleges (13), and schools from Voronezh, the Voronezh, Lipetsk, Orel, Tambov, Rostov, Kursk, and Moscow Regions (1,085 schools).
- E-mail correspondence with schoolmasters, deputy schoolmasters for pupil affairs, subject teachers, educational psychologist, young teachers (980), parents (132), heads of school libraries (21), heads of school scientific societies formed in educational institutions and establishments of further education in Voronezh and the Voronezh Region (78), and authorised representatives from seven municipal districts of the Voronezh Region.
- Organisation and holding events in collaboration with the education departments of Voronezh (18) and the heads of municipal districts of the Voronezh Region (39).
- 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 (5).
- Regular updates on information presented on VSU's information stands (15 schools).
- 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; organisation of open lectures by VSU researchers, as well as various festivals, master classes, and competitions, such as "With Books We Grow", "Rhetoric Festival", a reading competition "The Most Literate", a poetry workshop, festivals of the Russian language at schools and kindergartens, local history lessons, schools of young specialists, Lyceum Days, etc.
- Collaboration of the university academic staff members in the framework of the networking cooperation with schools: elective courses and extracurricular activities.
- Attracting schoolchildren to volunteer for VSU events.



- Networking cooperation with schools with the help of supervisors, students who are employed by schools, and authorised representatives from municipal districts of the Voronezh Region.

## II. EDUCATIONAL PROJECTS FOR SCHOOLCHILDREN AND THE GENERAL PUBLIC

The following projects were implemented in 2019:

1. The project "A Large University for a Large City". 36 popular science lectures by university researchers were held in the "Amital" book supermarkets (about 1,000 participants, over 50 thousand views on VKontakte page: <https://vk.com/amitalnapushkinskoi>).
2. An educational project "Health Triangle" (8 meetings, over 9,000 views of video broadcasting on the VKontakte page: <https://vk.com/amitalnapushkinskoi>).
3. A joint project of the Voronezh office of the National Public Educational Organisation "Russian Foundation "Znaniye" and the Department of Pre-University Training and Enrolment of Students. On-site seminars "Academic performance at schools in the context of psychology, pedagogics, and physical development of students" (Kalach, Bobrov. The seminars had been specially prepared for administrators and specialists at schools and pre-school and further education institutions with the support of the district administrations of the Voronezh Region).
4. "Parents' University", educational and social project, held at Voronezh schools No. 4 and No. 48 and Amital bookshops by the Department of Pre-university Education in cooperation with a medical practice institution, the children's out-patient centre No. 11 attached to Voronezh municipal out-patient centre No. 4 (January, May, and November 2019).
5. The final of the city environmental education event "Early Bloomers".
6. An international educational event "Total Dictation".



7. A joint project between VSU and Nikitin Library “Non-fiction Literature: Yesterday, Today, and Tomorrow” for Voronezh schools (15 quizzes “Complicated Things Made Simple”).
8. Saturday University at VSU with events broadcast live on the Youtube channel: <https://goo.gl/UddQVB>. 13 popular science lectures for schoolchildren were given and broadcast live.
9. The first Open Day for bachelor students at the Borisoglebsk branch of VSU.
10. The first creativity workshop of the Student Scientific Society that took place in the municipal Creativity Centre for Children and Young People (the children educational centre “FIRST”).
11. Spring University. Off-site counselling at the Student Scientific Society. A career guidance session for schoolchildren from forms 7-11.
12. National educational event “National Economic Dictation” dedicated to the topic: “A Strong Economy Means a Prosperous Nation”. 190 participants (25 students and 27 schoolchildren).

### III. IDENTIFYING, SUPPORTING, AND ATTRACTING TALENTED STUDENTS TO STUDY AT VSU

The university is actively involved in identifying, supporting, and attracting talented students to study at its education programmes. The following events were held to approach these tasks.

1. The first regional VSU innovation preaccelerator for schoolchildren “The League of Innovations 3.0” (research areas: Physics and Mathematics, Chemistry and Biology, IT, and Social Entrepreneurship). Partners: *GK Informsvyaz-Chernozemye* (Freedom) and *Biruch-NT* Innovation Centre (R&D of GK EFKO), 580 participants in 2019.
2. 1st intellectual tournament “Cup of the Black Earth Region” among schoolchildren in the game “What? Where? When?” (over 300 people on 27 teams from three regions (Voronezh, Lipetsk, and Belgorod) and four localities of the Central Black Earth Region).
3. 4th Scientific School for Talented Teenagers: Science, Creativity, and Culture (200 young researchers from Voronezh and the Voronezh Region).
4. Events in the framework of the collaboration with the Solnyshko school for gifted children (Repnoye), the Centre for Children’s Technical and Creative Projects “Technograd”, the Regional Centre for Identifying, Supporting, and Developing Children’s and Young People’s Abilities and Talents “Orion”, and the Centre for Curative Pedagogics and Differential Training.

Competitions, marathons, contests, and tournaments for schoolchildren were also held as part of these activities.



## COMPETITIONS FROM THE LIST OF COMPETITIONS BY THE MINISTRY OF SCIENCE AND HIGHER EDUCATION OF THE RUSSIAN FEDERATION


In the reporting period, the following events were held at the university:

- Multidisciplinary engineering academic competition among schoolchildren "Star" (994 participants in the field of Natural Sciences).
- Interregional Physics competition "Future Researchers: the Future of Science" (272 participants).
- Specialised competition for schoolchildren in Physics and Mathematics "Rosatom" (261 participants at the face-to-face stage).
- The final (face-to-face) stage of Saint-Petersburg online academic competition in Physics for schoolchildren from forms 7–11 (40 participants).

## OTHER COMPETITIONS, MARATHONS, CONTESTS, AND TOURNAMENTS

Other events included:

- Engineering academic competition for schoolchildren from Central Russia in Mathematics and Physics (743 participants).
- "Little Star" competition in Mathematics for schoolchildren from forms 1-5 (1,135 participants during the face-to-face stage).
- 9th competition in Informatics for schoolchildren (143 participants).
- 3rd interregional competition "Smart Start" in Computer Programming and Physics (1,900 participants).
- IT&Kids 2019 project contest (100 participants).
- Open academic competition in North-Caucasus Federal Districts "45th parallel" in Informatics (40 participants).
- Interregional open festival of robotics "Roboart-2019" (958 participants).
- 34th conference of the Student Scientific Society (2,600 participants).
- School stage of the conference of the Student Scientific Society (lyceum No. 2), conference for schoolchildren "Luminary" (Basov gymnasium), regional scientific and practical conference for schoolchildren "A Path into the World of Science" (lyceum No. 1), Conference for schoolchildren "Science Debut" (Novovoronezh Children Creativity Centre), conference "Modern Social and Economic Projects" (School No. 4 in Novovoronezh).
- Scientific and practical conference "Discoveries in Natural Sciences and Creativity" (School No. 67).
- Competition for schoolchildren from forms 9–11 "War Journalist. A Day in the Life" (further education centre "FIRST").

- 
- Competition for schoolchildren “Translation Marathon”. Online qualifying stage (<https://tests-olymp-pr.lunn.ru/>).
  - The Day of the Russian language in educational institutions of Voronezh and the Voronezh Region.
  - Competition “The Images of the City. Notes of a Tour Guide”.
  - Municipal contest “The Story of a Heroic Deed” (in Lizukov School No. 94).
  - Educational quiz “Knowledge Marathon” as part of the social project “Non-fiction Literature. Complicated Things Made Simple” (School No. 48).

A great number of events was prepared by faculties. For example, the Faculty of Physics held the following events in cooperation with the Kvantorium children’s technopark:

- First winter (training) tournament of natural scientists and the New Year tournament, January 2019 (<http://www.vsu.ru/ru/news/feed/2019/01/10598>).
- All-Russian tournament of young physicists (<http://www.vsu.ru/ru/news/feed/2019/04/10969>).
- Austrian tournament of young physicists held in English, April 2019 ([https://vk.com/voronezhskiy\\_turnir](https://vk.com/voronezhskiy_turnir)).
- Voronezh tournament of young natural scientists, April 2019 (in cooperation with gymnasium No. 5).
- Summer tournament school in English, June 2019 ([https://vk.com/voronezhskiy\\_turnir](https://vk.com/voronezhskiy_turnir)).
- “Kvantorium” session in Repnoye, October 2019.
- Voronezh tournament of young physicists (junior league”, forms 7–9, first league, forms 9–11, November 2019 (<http://www.vsu.ru/ru/news/feed/2019/11/11751>)).
- Language league, English subgroup, December 2019 (<http://www.vsu.ru/ru/news/feed/2019/12/11854>).
- Language league, German subgroup, December 2019 (<http://www.vsu.ru/ru/news/feed/2019/12/11951>).

Thematic schools for young specialists were held at all faculties: the School of Young Journalists, the School of Young Philosophers, the School of Young Experts in International Relations, the School of Local Historians, the Psychological and Pedagogical Club for Schoolchildren, the School of Young Psychologists, the School of Young Pharmacists, 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 School of Young Physicist, and the School of Young Economists.



#### **IV. EDUCATIONAL AND CREATIVITY EVENTS: POETRY, LITERATURE, SINGING, AND MUSICAL CONTESTS, LESSONS, CLUBS, AND FESTIVALS**

Varied activities were carried out in order to identify and develop creative talents among future university entrants:

- “Christmas Meetings” (recreation centre in the settlement Otradnoye in the Novousmansky district of the Voronezh Region).
- Music and poetry meeting “Farewell, Christmas Tree” (joint project between VSU and Voronezh Art Academy).
- Winter festival of original song “The Sail of Hope”, contests “Children Sing and Write”, “Family Singing”, “Singer-songwriters”, and “Poets”.
- 24th international youth festival of original songs and poetry “The Sail of Hope”.
- Contest among the Voronezh schoolchildren from forms 8–11 “Literate”.
- Contest among the Voronezh schoolchildren from forms 8–11 “I Read”.
- Publication of the student newspaper of the Voronezh Law College “Zerkalo” (<http://www.law.vrn.ru/index.php/12-osnovnaya-informatsiya/informatsiya-o-tehnikume/200-arkhiv-zerkala>).
- Management of the children’s press centre “Hummingbird” at Novousmansky lyceum (<https://vk.com/public191021713>).
- Regional contest of videos among schoolchildren (in cooperation with the Voronezh Regional Institute of Professional Development and Retraining of Staff Members of Educational Institutions).
- Municipal festival “You and I are Big Friends of Books”.
- Educational project “Word Territory” on the Voronezh public TV and radio company (<https://vestivrn.ru/programms/radio/territoriya-slova/>).
- Educational music programme on the “Radio Rossia”–Voronezh “Let’s Talk Together” (<https://vestivrn.ru/programms/radio/davay-s-toboy-pogovorim/>).





The following events were held for school teachers as part of the pre-university work:

1. Regional stage of the national forum "Teacher of Russia: innovations in education".
2. Municipal pedagogical conference "Projecting an individual educational path for students. Gifted children" with the support of the Department of Education, Science, and Youth Policy, the Public Chamber of the Voronezh Region, and the Education Development Institute.
3. Scientific school for teachers at VSU.
4. On-site seminars on distance learning for schools in Voronezh, the Voronezh and neighbouring regions "E-learning and distance learning technologies as a means of implementing education programmes".
5. Regional seminar for teachers "Distance learning as a means of implementing education programmes".
6. Forum for teachers of Mathematics, Physics, and Informatics.
7. Scientific school for teachers of foreign languages.
8. Second municipal pedagogical conference "Projecting an individual educational path for students. Gifted children".
9. Seminar for Voronezh school teachers in the municipal Creativity Centre for Children and Young People.
10. The final stage of the programme "Teacher in Russia", in cooperation with charitable foundation for support and development of education "New Teacher" (March, June, December).

The following social projects were held in the reporting period:

- Big Parents' Congress.
- Educational forum "Future-oriented Education: VSU and International Universities".



## V. INFORMATION SUPPORT OF THE UNIVERSITY ADMISSION

Several channels were used to disperse information about the rules of university admission.

Detailed information concerning the university admissions process and studies was published in online mass media, regional mass media, Voronezh State University Newspaper, and in the reference guide for university entrants "Chance". It was also broadcast by regional and city radio.

The Department of Pre-university Education provided regular online and telephone consultations for prospective students on the questions of the University admissions process (on the official VSU website, social networks, and via email).

### EXHIBITIONS

A university delegation headed by the rector took part in the following events:

- 17th educational exhibition "Education and Profession – 2019" (Uzbekistan, April 2019).
- Recruitment Fair "Choose your Own Profession" (Voronezh, April 2019).

### CAREER GUIDANCE FOR UNIVERSITY ENTRANTS

1. Open days were held: 20 January 2019 (2,615 participants), 21 April 2019 (3,585 participants), 13 October 2019 (3,258 participants), total: 9,458 participants. For bachelor's degree students from Borisoglebsk branch of VSU: 14 April 2019 (25 people).
2. **45 off-site open information days were held in Voronezh schools** (No. 2, 8, 16, 34, 38, 48, 56, 71, 80, 100, 102, lyceum No. 1, 4, gymnasium No. 1, 2) and in schools of the Voronezh, Lipetsk, Tambov, and Belgorod Regions. VSU had off-site presentations in the Nizhnedevitsk, Khokhol, Bobrov, Panino, Liski, Ostrogozhsk, Ertil, Boguchar, Kalach, Pavlovsk, Rossosh, Anna, Verkhny Mamon, and Novaya Usman regions, Novovoronezh, Stary Oskol, the settlements of Lev Tolstoy, Mordovo, Otradnoye, and Kurbatovo. All in all, **118 educational institutions** were visited.
3. Off-site open day. Presentation of the Faculty of Pharmaceutics for students of Borisoglebsk College of Medicine.
4. Career guidance project "VSU for School".
5. Career guidance project "VSU-Live!" One day in the student environment.

## VSU TESTING CENTRE WITHIN THE PROGRAMME “PROFORIENTATOR”

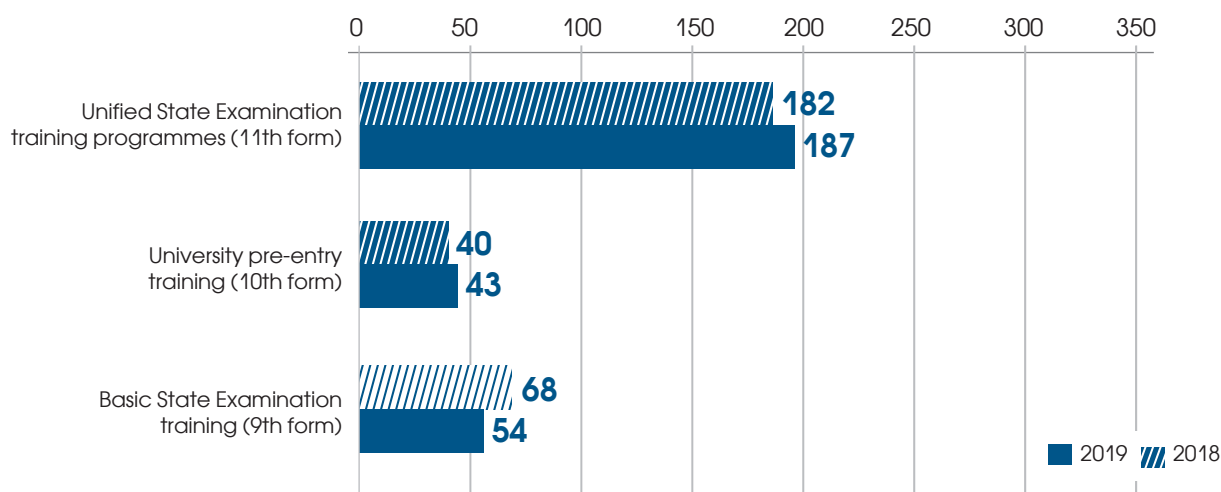
Computer-based testing of schoolchildren was organised at the VSU Testing Centre within the programme “Proforientator” in collaboration with the Centre of Testing and Development “Humanitarian Technologies”, Moscow. The number of people tested amounted to 101.

## VI. PRE-STUDY COURSES (ADDITIONAL GENERAL DEVELOPMENT PROGRAMMES)

In 2019, VSU offered 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: “Training for the Unified State Examination”, “Preparation for the Final Essay”, “University Pre-entry Training”, “Basic State Examination Training”, and “Remote Training for the Unified State Examination” (fig. 4.1).

Figure 4.1

### FREQUENCY DISTRIBUTION OF STUDENTS ACCORDING TO THE PROGRAMMES OF PRE-STUDY COURSES



In September 2014, the programme “Preparation for the Final Essay” was opened for 11th form students. In 2019, the programme was completed by 13 students.

In 2019, 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 10 students.

Pre-study courses continued the practice of conducting mock USEs which were followed by consultations on the examination results held by USE expert lecturers. Overall, 13 examinations taken by over 618 students were conducted.

# 4

On 7 September 2019, an open day for pre-study courses was held for the first time. Preparation work has begun in small groups.

The analysis of USE results for the graduates of pre-study courses as well as their matriculation results allows carrying out a qualitative assessment of the training provided on the courses (see Tables 4.1 and 4.2).

Table 4.1

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

Subject	2018	2019
Russian Language	80.2	80.65
Mathematics	57.92	61.6
Biology	56.75	63.58
Foreign Language (English)	54	78.23
Informatics and ICT	64.97	70.48
History	57.5	63.57
Literature	65.3	73.15
Social Studies	59.27	63.27
Physics	63.82	64.18
Chemistry	49.71	58.72

Table 4.2

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

	2018	2019
<b>Number of graduates</b>	<b>182</b>	<b>187</b>
Matriculated at VSU	105	115
Matriculated at other higher educational institutions in Voronezh	55	58
Matriculated at higher educational institutions in other cities	9	10
<b>Matriculated at higher educational institutions in other cities</b>		
Total number of students matriculated at higher educational institutions	169	183
Percentage	92.9%	97.9%

### 4.3. MAIN RESULTS OF THE 2019 ADMISSION CAMPAIGN

In 2019, following the results of an open public competition, Voronezh State University was allocated 2,239 state-funded places for bachelor's, diploma, and master's degree programmes, including 2,094 places for full-time students.

Among bachelor and diploma programmes, Law, Economics, and Romance and Germanic Philology remained the priority specialities for the graduates of secondary schools and institutions of secondary vocational education. At the same time, IT education is becoming more popular, and consequently, the programmes "Applied Mathematics and Informatics" and "Computer Sciences" were among the most demanded last year. The favourable tendency for the increase in the number of students who enrolled in full-time bachelor's degree and diploma degree programmes on a fee-paying basis remained rather strong this year. In 2018, the number of such students was 1,721, whereas in 2019 it was 2,191. In 2019, the number of first year students who enrolled in programmes on a fee-paying basis was over 3,000 students.

Distribution of the full-time first year students by bachelor and diploma degree programmes in 2019 is shown in fig. 4.2.

The number of part-time and extramural students enrolled in bachelor and diploma degree programmes has recently remained stable and low. What is more, state-funded places are now available only for part-time programmes and extramural Law programmes can only be completed as a second degree (fig. 4.3 and 4.4.).

Figure 4.2

## DISTRIBUTION OF THE FULL-TIME FIRST YEAR STUDENTS BY BACHELOR AND DIPLOMA DEGREE PROGRAMMES AND SPECIALITIES

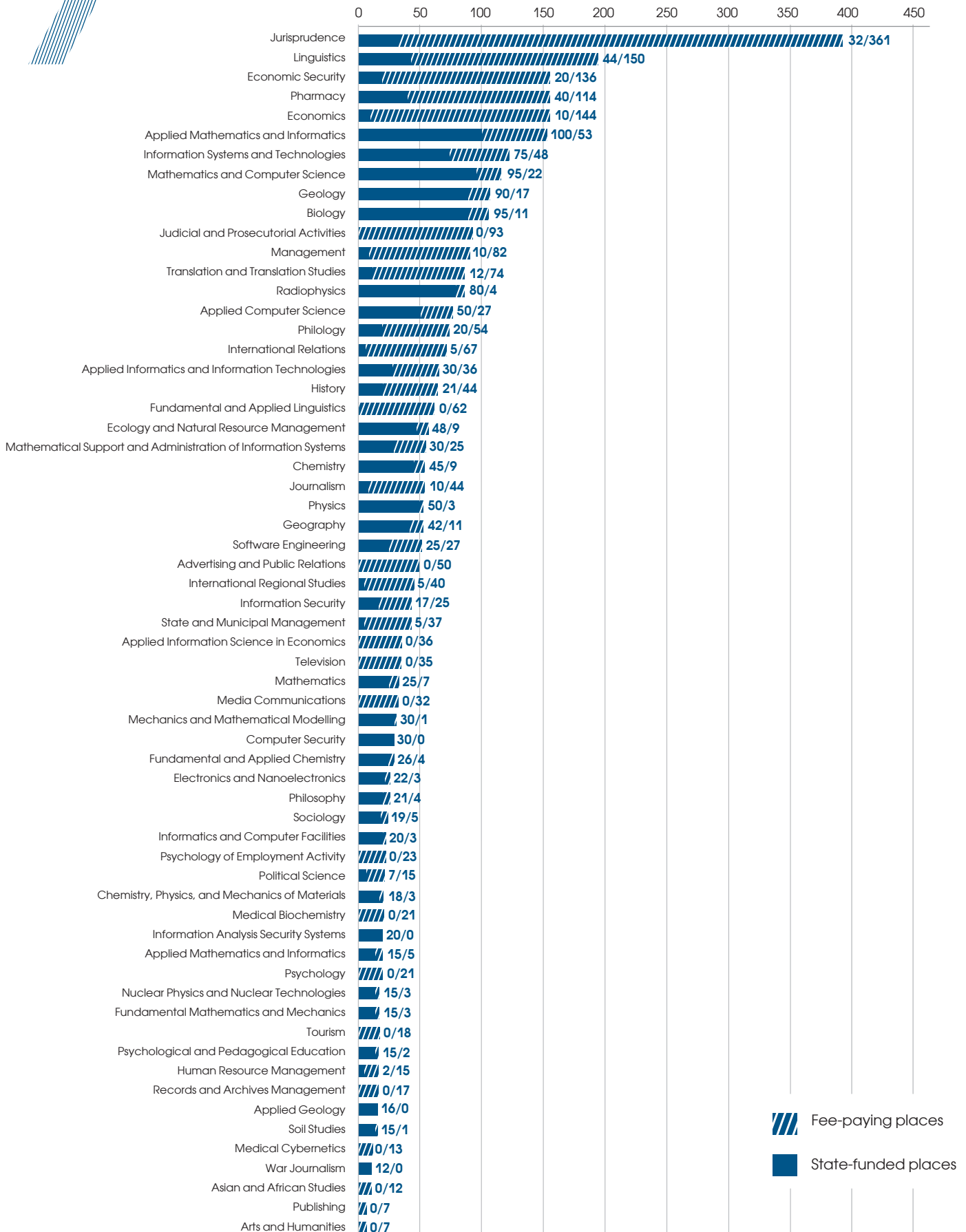


Figure 4.3

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

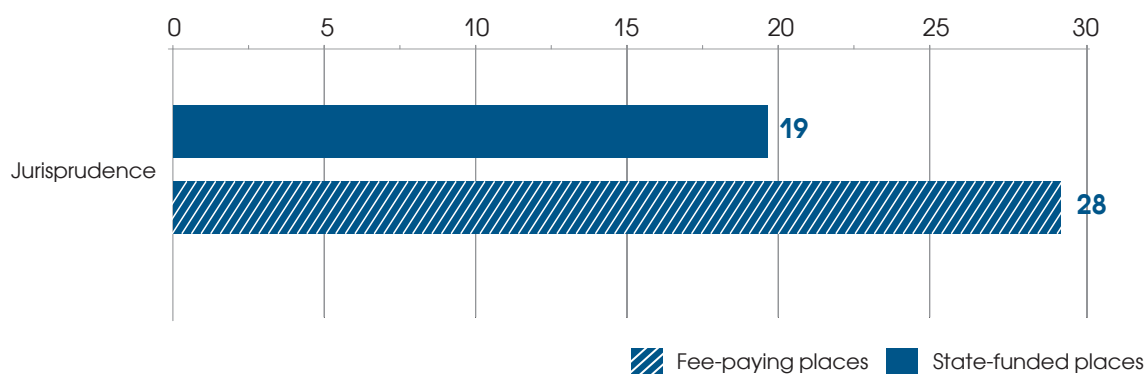
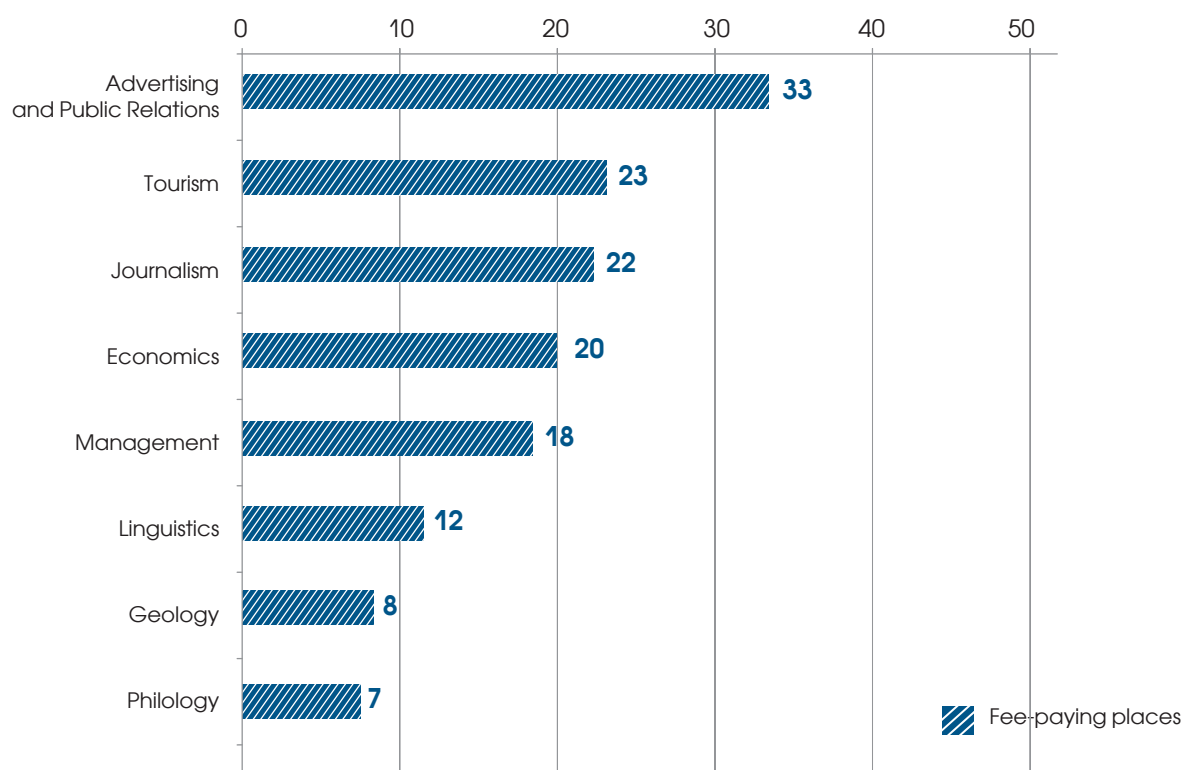


Figure 4.4

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



Unlike enrolment numbers for bachelor's and diploma degree programmes, which have been steadily increasing, the number of students enrolled in master's degree programmes in 2019 slightly decreased in all forms of study as compared to the figures for previous years (fig. 4.5– 4.7).



Figure 4.5

## NUMBER OF FULL-TIME STUDENTS ENROLLED IN MASTER'S DEGREE PROGRAMMES

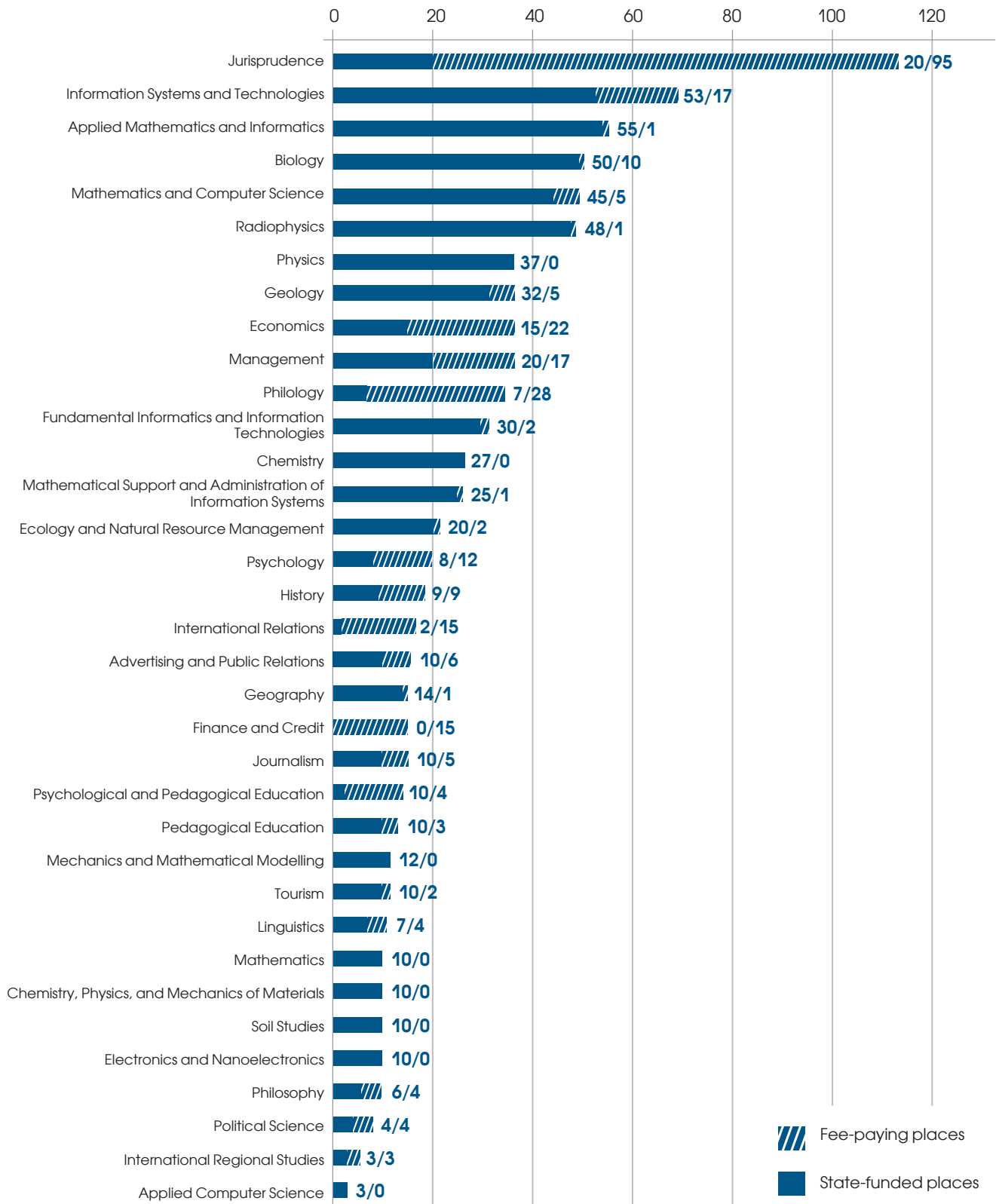






Figure 4.6

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

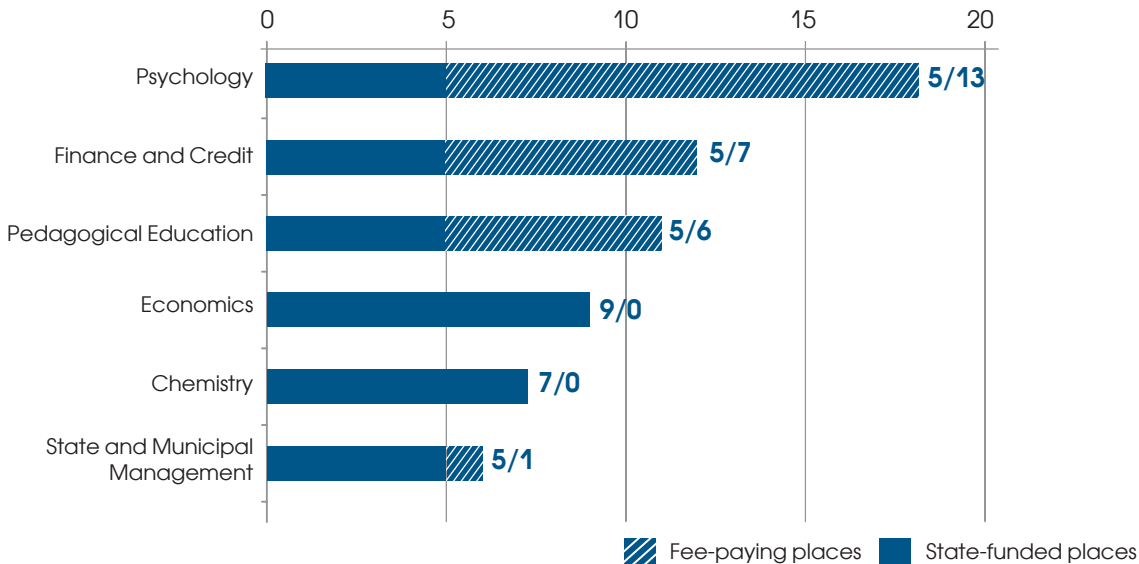
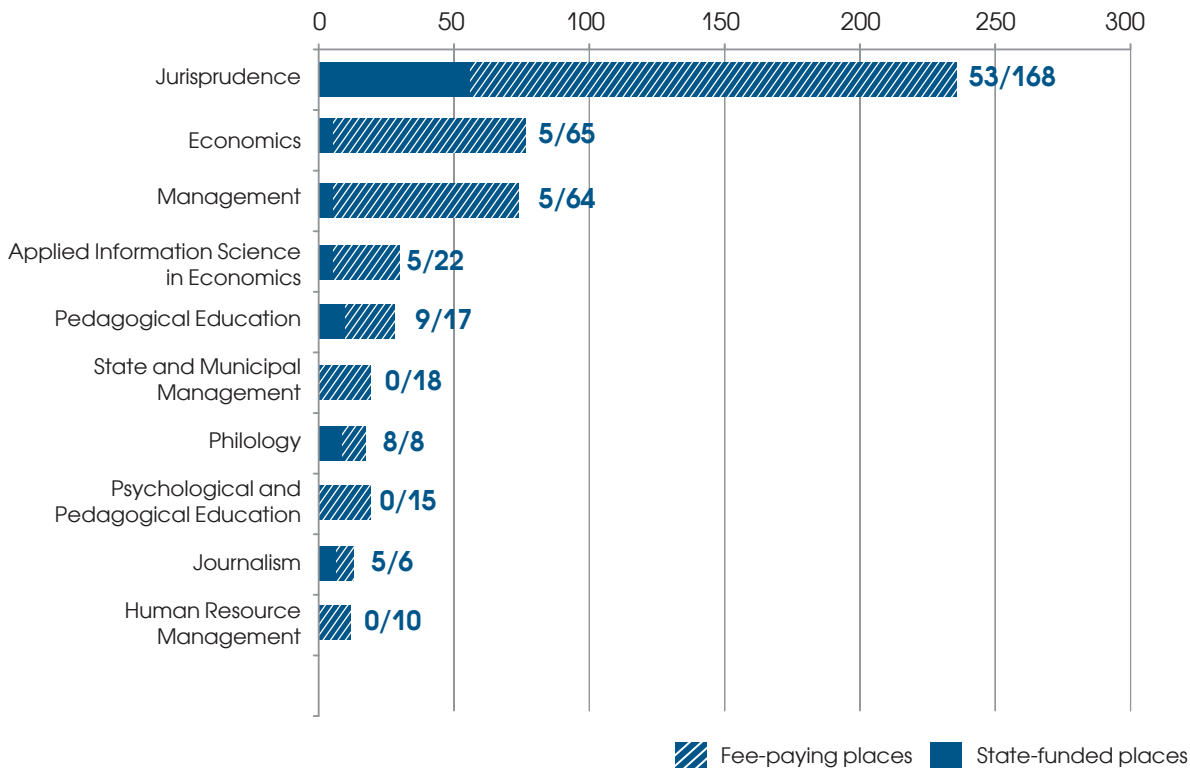


Figure 4.7

NUMBER OF EXTRAMURAL STUDENTS ENROLLED IN MASTER'S DEGREE PROGRAMMES

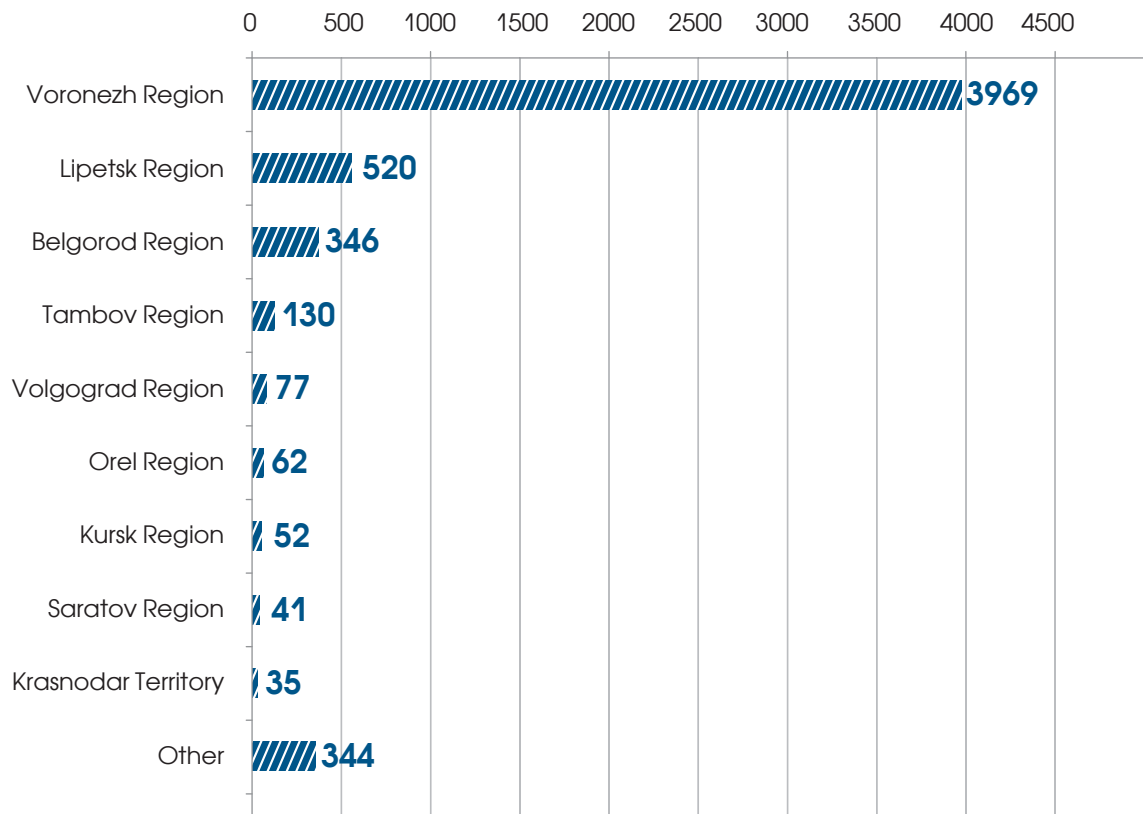




In 2019, applicants from over 70 subjects of the Russian Federation filed their documents with VSU (fig. 4.8).

Figure 4.8

### DISTRIBUTION OF THE STUDENTS ADMITTED TO VSU ACCORDING TO THE SUBJECTS OF THE RUSSIAN FEDERATION



Traditionally, the leading regions providing VSU with students are neighbouring regions in the Central Black Earth Region headed by the Lipetsk and the Belgorod Regions.

In 2019, VSU enrolled 8 winners and awardees of academic competitions held among schoolchildren (Table 4.3).

Table 4.3

### LIST OF HIGHER EDUCATION PROGRAMMES ON WHICH VSU ENROLLED WINNERS AND AWARDEES OF NATIONAL ACADEMIC COMPETITIONS HELD AMONG SCHOOLCHILDREN

Speciality	Number of students enrolled without examinations	Number of students enrolled with the score of 100 points in an academic competition
02.03.01 Mathematics and Computer Sciences	0	1
01.03.02 Applied Mathematics and Informatics	1	0
09.03.04 Software Engineering	2	1
40.03.01 Jurisprudence	2	0
45.03.02 Linguistics	1	0

Apart from higher professional education programmes, VSU offers fee-paying secondary vocational education programmes for graduates of forms 9 and 11. In 2019, state-funded places for the speciality "Pharmacy" were allocated for the first time (15 state-funded places). In the reporting year, 245 people were enrolled on secondary vocational education programmes (Table 4.4).

Table 4.4

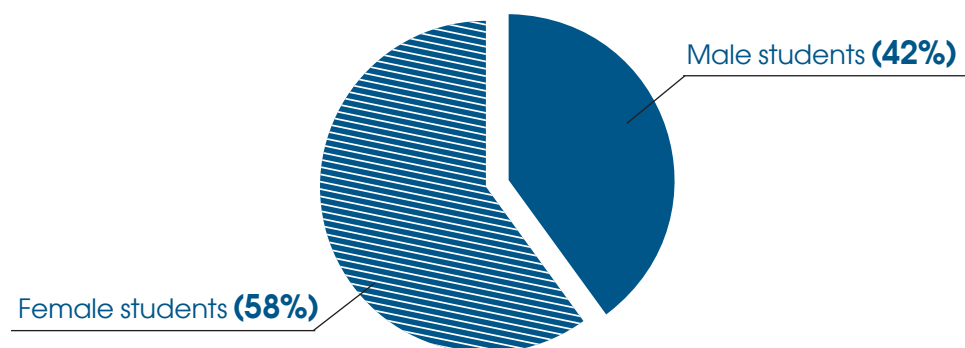
### NUMBER OF STUDENTS ADMITTED TO SECONDARY VOCATIONAL EDUCATION PROGRAMMES

Name of the secondary vocational education speciality	Funded from the federal budget	Funded from commercial educational services
<b>For graduates of basic general education programmes (form 9):</b>		
09.02.03 Programming in Computer Systems	–	36
33.02.01 Pharmacy	15	60
38.02.01 Economics and Accounting (area-based)	–	18
42.02.01 Advertising	–	56
43.03.10 Tourism	–	26
<b>For graduates of general secondary education programmes (form 11):</b>		
31.02.04 Optical Eyecare	–	11
38.02.01 Economics and Accounting (area-based)	–	23
<b>Secondary vocational education programmes, total</b>	<b>15</b>	<b>230</b>

The gender composition of the admitted students underwent some changes, and the number of male students increased by 3% (see fig. 4.9).

Figure 4.9

### GENDER COMPOSITION OF THE FIRST-YEAR STUDENTS IN HIGHER EDUCATION PROGRAMMES



## 4.4. GENERAL INFORMATION ON THE ACADEMIC PROGRAMMES IMPLEMENTED AT VSU IN 2019

In 2019, higher education programmes included 121 bachelor's degree programmes (48 specialities), 25 diploma degree programmes (14 specialities), 141 master's degree programmes (39 specialities), 75 PhD programmes (17 research areas), and 2 residency specialities (see Table 4.5).

Table 4.5

### ACADEMIC PROGRAMMES IMPLEMENTED AT VSU IN 2019

Code Fields of education	Titles of fields of education	Bachelor's degree		Master's degree		Specialist's degree		Postgraduate Training Programmes		Residency training
		Specialities	Programmes	Specialities	Programmes	Major speciality	Specialisation	Specialities	Programmes	Major speciality
01.00.00	Mathematics and Mechanics	4	13	3	15	1	5	1	3	
02.00.00	Computer and Information Sciences	3	6	3	13					
03.00.00	Physics and Astronomy	2	10	2	11			1	5	
04.00.00	Chemistry	2	4	2	6	1	1	1	7	
05.00.00	Geosciences	3	11	3	11			1	11	
06.00.00	Biological Sciences	2	9	2	9			1	8	
09.00.00	Informatics and Computer Facilities	4	9	1	6			1	4	
10.00.00	Information Security	1	1			2	3	1	1	
11.00.00	Electronics, Radioengineering, and Communication Systems	1	2	1	1					
14.00.00	Nuclear Energy and Nuclear Technologies	1	1	1	1					
21.00.00	Applied Geology, Mining, Oil and Gas Engineering, and Geodesy					1	1			
30.00.00	Fundamental Medicine					3	3			
33.00.00	Pharmacy					1	1	1	4	2
37.00.00	Psychological Sciences	1	2	1	2	1	1	1	2	
38.00.00	Economics and Management	5	17	6	23	1		1	5	
39.00.00	Sociology and Social Development	1	1							
40.00.00	Jurisprudence	1	4	1	14	1	1	1	10	
41.00.00	Political Sciences and Regional Studies	3	4	3	5			1	1	
42.00.00	Mass Media and Library Science	4	9	3	4					
43.00.00	Tourism and Service	1	1	1	1					
44.00.00	Education and Pedagogical Sciences	1	2	2	7			1	1	
45.00.00	Linguistics and Literary Studies	3	9	2	8	1	8	1	7	
46.00.00	History and Archaeology	2	2	1	2			1	3	
47.00.00	Philosophy, Ethics, and Religious Studies	1	2	1	2			1	2	
50.00.00	Art Studies	1	1							
51.00.00	Culture Studies and Sociocultural Projects							1	1	
56.00.00	Military Operation					1	1			
58.00.00	Asian and African Studies	1	1							
<b>Total</b>		<b>48</b>	<b>121</b>	<b>39</b>	<b>141</b>	<b>14</b>	<b>25</b>	<b>17</b>	<b>75</b>	<b>2</b>

In 2019, the aggregate (normalized) contingent of students within higher professional education programmes totalled over 15,505 people including:

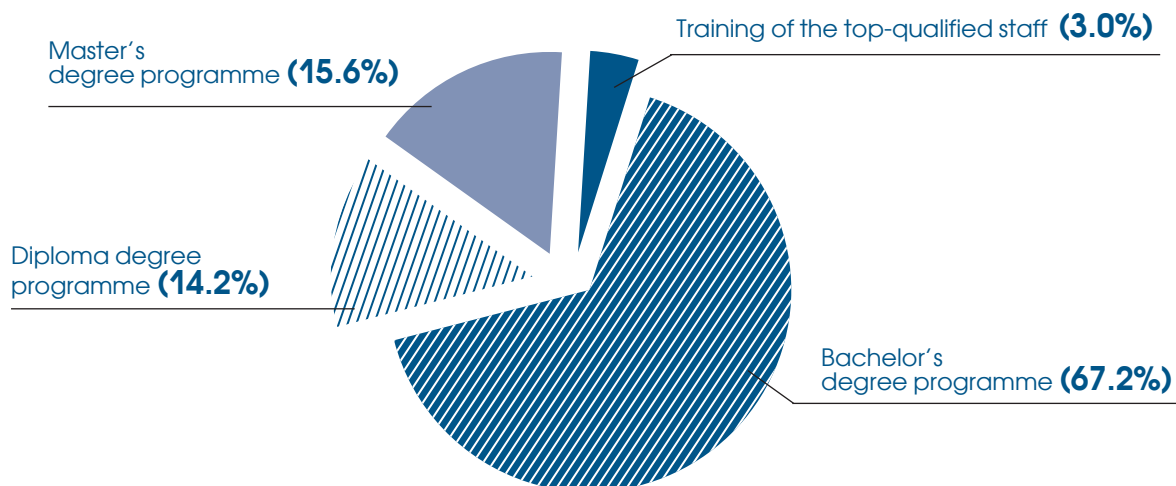
- 10,381 bachelor's degree students,
- 2,406 diploma degree students,
- 2,191 master's degree students,
- 508 postgraduate students,
- and 16 residents.

Figure 4.10 demonstrates the structure of the normalized contingent within higher education programmes provided by the university.

In 2019, the number of PhD and residents in the normalized contingent amounted to 17.2%.

Figure 4.10

#### THE STRUCTURE OF THE NORMALISED CONTINGENT OF UNIVERSITY STUDENTS WITHIN HIGHER EDUCATION PROGRAMMES





Master's degree education programmes provided in 2018/19 are listed in Table 4.6.

Table 4.6

**MASTER'S PROGRAMMES PROVIDED BY THE UNIVERSITY  
IN THE 2018/19 ACADEMIC YEAR**

Specialities	Programmes
<b>THE FACULTY OF BIOMEDICAL SCIENCES</b>	
06.04.01 Biology	Biophysics Genetics Ecology Zoology Biomedical Sciences Biochemistry and Phytology Genetics and Physiology Genetic Engineering
06.04.02 Soil Studies	Soil Genesis and Evolution in Natural and Anthropogenic Landscapes
05.04.06 Ecology and Natural Resource Management	Ecological Safety
<b>THE FACULTY OF GEOGRAPHY, GEOECOLOGY, AND TOURISM</b>	
05.04.02 Geography	Territory Planning and Landscape Design Landscape Studies and Landscape Design Social and Economic Geography
05.04.06 Ecology and Natural Resource Management	Ecological Monitoring and Environmental Impact Assessment
<b>THE FACULTY OF GEOLOGY</b>	
05.04.01 Geology	Geological Surveying in Orogens Geological Engineering Oil and Gas Geophysics Regional Geology Fundamental Research in Geology Ecological Management
<b>THE FACULTY OF JOURNALISM</b>	
42.04.02 Journalism	Mass Media and the Internet Advertising and Public Relations (extramural) TV and Radio Functioning Process (extramural)
42.04.01 Advertising and Public Relations	Advertising and Public Relations in Mass Media
<b>THE FACULTY OF HISTORY</b>	
46.04.01 History	Research and Reaching in History Archaeology
41.04.04 Political Science	Analysis of Politics and Policies State and Municipal Policy and Management, Political Examination

Table cont. 4.6

Specialities	Programmes
<b>THE FACULTY OF COMPUTER SCIENCES</b>	
02.04.01 Mathematics and Computer Science	Informatics (Computer Sciences) as a Second Competence Computer Modelling and Artificial Intelligence
09.04.02 Information Systems and Technologies	Information Systems Analysis and Synthesis Information Systems Security Information Technologies in Management Artificial Applied Intelligence Systems Information Systems Design Technologies Informatics as a Second Competence
<b>THE FACULTY OF MATHEMATICS</b>	
01.04.01 Mathematics	Mathematical Models and Hydrodynamics Differential Equations, Dynamical Systems, and Optimal Control Mathematical Modelling
02.04.01 Mathematics and Computer Science	Mathematical Methods and Computer Technologies In Natural Science, Economics, and Management Mathematical Methods in Economics and Finance Mathematical Basis for Computer Science Mathematical Analysis and Applications Mathematical and Computer Modelling
<b>THE FACULTY OF INTERNATIONAL RELATIONS</b>	
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
<b>THE FACULTY OF APPLIED MATHEMATICS, INFORMATICS, AND MECHANICS</b>	
02.04.02 Fundamental Informatics and Information Technologies	Machine Learning and Intelligent Information Technologies Mobile Applications Development Technologies Intelligent Information Technologies Mobile Application Programming
01.04.02 Applied Mathematics and Informatics	Information Technologies and Economic Activities Computer Technologies for the Problems of Mathematical Physics, Optimisation, and Management Mathematical Foundations for Computer Graphics Mathematical Support and Software for Information Systems Mathematical Basis for Computer Graphics Mathematical and Information Support in Economic Activity Mathematical and Software Support for ECM Mathematical Modelling Machine Learning and Intellectual Systems Optimisation and Optimal Control Parallel Programming and Distributed Computing
02.04.03 Mathematical Support and Administration of Information Systems	Management of the Design and Department of Information Systems Information Technologies
01.04.03 Mechanics and Mathematical Modelling	Applied Mechanics and Computer Modelling
38.04.05 Applied Information Science in Economics	Information Business Analytics (extramural)

Specialities	Programmes
<b>THE FACULTY OF ROMANCE AND GERMANIC PHILOLOGY</b>	
45.04.01 Philology	International Business Communication Business Communication in Economics: German
45.04.02 Linguistics	Linguistic Support for Project Activities in International Cooperation (in the Area of Education, Culture, and Business) Translation theory and practice
44.04.01 Pedagogical Education	Innovations in Education; Teaching Foreign Languages with the Help of Online Technologies in Schools and Further Education Foreign Language Teaching with the Application of Online Technologies
<b>THE FACULTY OF PHILOSOPHY AND PSYCHOLOGY</b>	
44.04.01 Pedagogical education	Pedagogical Management and Innovations in Education Innovations in Education
37.04.01 Philosophy	Ontology and Epistemology Philosophy of Creativity and Cultural Industries
37.04.01 Psychology	Clinical and Psychological Follow-up (part-time learning) Psychology of Personality
44.04.02 Psychological and Pedagogical Education	Psychology and Pedagogy of Creativity Educational Psychology Management and Education
<b>THE FACULTY OF PHYSICS</b>	
03.04.02 Physics	Optics and Nanophotonics Physics of Nanosystems Nuclear and Elementary Particle Physics Medical Physics
03.04.03 Radiophysics	Information Systems and Processes Computer Radiophysics Computer Methods of Radiophysical Information Processing Microelectronics and Semiconductor Devices Power Electronics Telecommunication Systems and Electronic Warfare Statistical Radiophysics
11.04.04 Electronics and Nanoelectronics	Integrated Electronics and Nanoelectronics
11.04.02 Nuclear Physics and Nuclear Technologies	Physics of Atomic Nucleus and Elementary Particles
<b>THE FACULTY OF PHYLOLOGY</b>	
45.04.01 Philology	Practical Philology in the Organisation of Administrative, Cultural, and Educational Activity (extramural) Psycholinguistics and Forensic Linguistics (extramural) Russian Literature in the European Context Russian Language and Literature in Cultural and Pedagogical Aspects
<b>THE FACULTY OF CHEMISTRY</b>	
04.04.01 Chemistry	Analytical Chemistry Organic Chemistry Physical Chemistry Chemical Expertise
04.04.02 Chemistry, Physics, and Mechanics of Materials	Chemistry, Physics, and Mechanics of Function Materials and Nanomaterials Chemistry, Physics, and Mechanics of Function Materials



End of table 4.6

Specialities	Programmes
<b>THE FACULTY OF ECONOMICS</b>	
38.04.01 Economics	Quantitative Analysis in Financial Markets Corporate Accounting, Financial and Investment Analysis Accounting, Analysis, and Audit Financial Analyst: Investments, Credit standing, Risks Economics and E-commerce Economics of Organisations and Markets Labour Economics Economy of a Firm Health Care Accounting, Control, and Analysis
38.04.02 Management	General and Strategic Management Marketing Management Economics and Firm Management Healthcare Management (extramural) International Tourism Management
38.04.08 Finance and Credit	Banks and Banking Financial Management Banking Support of Contracts
38.04.04 State and Municipal Management	Administration of the Territory Social and Economic Development (extramural, part-time learning)
38.04.03 Human Resource Management	Human Resources Management (extramural, part-time learning)
<b>THE FACULTY OF LAW</b>	
40.04.01 Jurisprudence	Conventional Law Corporate Attorney Criminalistics, Operational Investigations, Judicial, and Advocate Activities International Law and Business Financial and Tax Law Taxation and Civil Legislation Organization of the Judicial over and Law Enforcement Activities Judicial and Non-Judicial Forms of Civil Rights Protection Theory and History of State and Law (extramural) Criminal law, Criminology, and Penal Law Criminal Procedure Legal Defence in Administrative and Administrative Procedure Law (extramural, part-time learning) Lawyer in the Field of Labour, Social, and Land Law Public Authority Attorneys



## 4.5. TRAINING THE TOP-QUALIFIED ACADEMIC STAFF: POSTGRADUATE DEGREE AND RESIDENCY COURSES

The number of postgraduate students according to research areas and fields of study is shown in Table 4.7.

Table 4.7

### DISTRIBUTION OF STUDENTS WITHIN POSTGRADUATE DEGREE COURSES ACCORDING TO SPECIALISATIONS

Codes of research areas and fields of study	Titles of research areas and fields of study	Number of postgraduate students			
		Total	including:		
			RF citizens	CIS citizens	Foreign citizens
	<b>Total</b>	<b>543</b>	<b>478</b>	<b>14</b>	<b>51</b>
01.06.01	<b>Mathematics and Mechanics</b>	<b>58</b>	<b>54</b>	<b>2</b>	<b>2</b>
	Substantial, Complex, and Functional Analysis	8	8	0	0
	Differential Equations, Dynamical Systems, and Optimal Control	40	37	2	1
	Solid Mechanics	10	9	0	1
03.06.01	<b>Physics and Astronomy</b>	<b>59</b>	<b>54</b>	<b>0</b>	<b>5</b>
	Theoretical Physics	13	11	0	2
	Radiophysics	25	25	0	0
	Optics	6	5	0	1
	Condensed Matter Physics	11	10	0	1
	Semiconductor Physics	4	3	0	1
04.06.01	<b>Chemical Sciences</b>	<b>39</b>	<b>32</b>	<b>0</b>	<b>7</b>
	Inorganic Chemistry	5	5	0	0
	Analytical Chemistry	7	4	0	3
	Organic Chemistry	8	5	0	3
	Physical Chemistry	8	7	0	1
	Electrochemistry	4	4	0	0
	High-molecular Compositions	4	4	0	0
	Solid State Chemistry	3	3	0	0
05.06.01	<b>Geosciences</b>	<b>38</b>	<b>31</b>	<b>0</b>	<b>7</b>
	General and Regional Geology	3	1	0	2
	Palaeontology and Stratigraphy	1	1	0	0
	Petrology, Volcanology	1	1	0	0
	Lithology	2	2	0	0
	Geohydrology	2	1	0	1
	Geological Engineering, Permafrostology, and Soil Science	1	1	0	0
	Geophysics, Geophysical Methods in Mineral Deposit Exploration	4	3	0	1
	Geology, Solid Mineral Deposits Exploration, Minerageny	6	6	0	0

Table cont. 4.7

Codes of research areas and fields of study	Titles of research areas and fields of study	Number of postgraduate students			
		Total	including:		
			RF citizens	CIS citizens	Foreign citizens
	Physical Geography and Biogeography, Soil Geography and Landscape Geochemistry	5	5	0	0
	Economic, Social, Political, and Recreational Geography	4	3	0	1
	Geoecology	9	7	0	2
06.06.01	<b>Biological Sciences</b>	<b>58</b>	<b>49</b>	<b>1</b>	<b>8</b>
	Biophysics	5	3	1	1
	Biochemistry	14	13	0	1
	Botany	4	4	0	0
	Zoology	6	5	0	1
	Entomology	3	3	0	0
	Genetics	15	13	0	2
	Ecology	8	6	0	2
	Soil Studies	3	2	0	1
09.06.01	<b>Informatics and Computer Facilities</b>	<b>53</b>	<b>47</b>	<b>1</b>	<b>5</b>
	System Analysis, Management, and Processing of Information	10	9	1	0
	Management in Social and Economic Systems	4	3	0	1
	Theory of Informatics	17	17	0	0
	Mathematical Modelling, Numerical Methods, and Program Systems	22	18	0	4
11.06.01	<b>Electronics, Radioengineering, and Communication Systems</b>	<b>6</b>	<b>5</b>	<b>0</b>	<b>1</b>
	Solid-state Electronics, Radioelectronic Components, Microelectronics, Nanoelectronics, Quantum Effect Tools	6	5	0	1
33.06.01	<b>Pharmacy</b>	<b>10</b>	<b>9</b>	<b>0</b>	<b>1</b>
	Pharmacology, Clinical Pharmacology	1	0	0	1
	Medicinal Product Formulation Technology	3	3	0	0
	Pharmaceutical Chemistry, Pharmacognosy	3	3	0	0
	Pharmacy Business Organization	3	3	0	0
37.06.01	<b>Psychological Sciences</b>	<b>8</b>	<b>8</b>	<b>0</b>	<b>0</b>
	Social Psychology	6	6	0	0
	Pedagogical Psychology	2	2	0	0
38.06.01	<b>Economics</b>	<b>52</b>	<b>47</b>	<b>1</b>	<b>4</b>
	Economics Theory	7	7	0	0
	Economics and National Economy Management	30	25	1	4
	Finance, Currency Circulation, and Credit	2	2	0	0
	Accounting, Statistics	9	9	0	0
	Mathematical and Instrumental Techniques in Economics	4	4	0	0

Codes of research areas and fields of study	Titles of research areas and fields of study	Number of postgraduate students			
		Total	including:		
			RF citizens	CIS citizens	Foreign citizens
40.06.01	<b>Jurisprudence</b>	<b>71</b>	<b>69</b>	<b>1</b>	<b>1</b>
	Theory and History of State and Law, History of State and Law Studies	9	8	1	0
	Constitutional Law, Constitutional Proceedings, Municipal Law	7	6	0	1
	Finance Law, Tax Law, Budget Law	3	3	0	0
	Labour Law, Social Security Law	1	1	0	0
	Criminal Law, Criminology; and Penal Law	8	8	0	0
	Criminal Procedure	5	5	0	0
	International and European Law	4	4	0	0
	Criminalistics, Operational Investigations, Judicial and Expert Activity	8	8	0	0
	Administrative Law, Administrative Procedure	15	15	0	0
	Civil and Arbitral Procedure	11	11	0	0
41.06.01	<b>Political Sciences and Regional Studies</b>	<b>4</b>	<b>3</b>	<b>0</b>	<b>1</b>
	Political Institutions, Processes and Technologies	4	3	0	1
44.06.01	<b>Education and Pedagogical Sciences</b>	<b>11</b>	<b>9</b>	<b>1</b>	<b>1</b>
	General Pedagogics, History of Pedagogics and Education	11	9	1	1
45.06.01	<b>Linguistics and Literary Studies</b>	<b>44</b>	<b>33</b>	<b>7</b>	<b>4</b>
	Russian Literature	7	7	0	0
	International Literature	3	3	0	0
	Journalism	9	8	0	1
	Russian Language	9	5	1	3
	Germanic Languages	5	2	3	0
	Romance Languages	4	3	1	0
	Linguistic Theory	7	5	2	0
46.06.01	<b>Historical Sciences and Archaeology</b>	<b>24</b>	<b>20</b>	<b>0</b>	<b>4</b>
	Russian History	13	10	0	3
	General History	7	6	0	1
	Archaeology	4	4	0	0
47.06.01	<b>Philosophy, Ethics, and Religious Studies</b>	<b>5</b>	<b>5</b>	<b>0</b>	<b>0</b>
	Ontology and Epistemology	4	4	0	0
	Social Philosophy	1	1	0	0
51.06.01	<b>Cultural Studies</b>	<b>3</b>	<b>3</b>	<b>0</b>	<b>0</b>
	Theory and History of Culture	3	3	0	0

In the 2018/19 academic year, 23 people took postgraduate academic staff training residency programme 30.08.02 Management and Economics of Pharmacy.

## 4.6. STATE FINAL EXAMINATION

204 state examination committees worked during the state final examination.

The number of students who passed the state final examination is as follows: 4,248 people, including 2,452 bachelor’s degree students, 269 diploma degree students, 1,287 master’s degree students, 103 PhD students, 15 residents, and 128 secondary vocational education (SVE) specialists (Table 4.8, fig. 4.11).

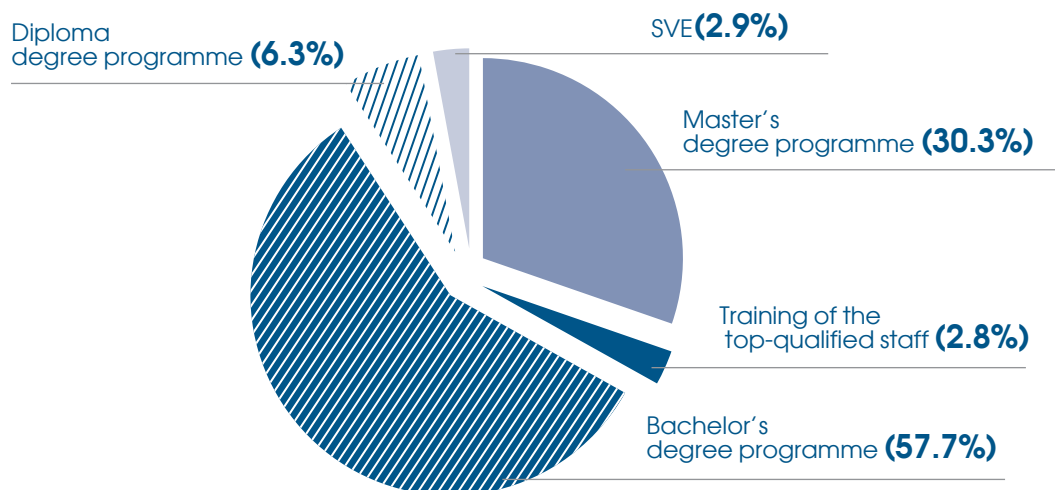
Table 4.8

### DISTRIBUTION OF STUDENTS ACCORDING TO THE MODES OF STUDY AND DEGREE LEVELS IN 2019

Study option	Bachelors		Specialists		Masters		Secondary vocational education		Postgraduate training programmes	Residency training
	excellent	Total	excellent	Total	excellent	Total	excellent	Total	Total	Total
Full-time	364	2,018	38	227	449	921	12	122	103	15
Extramural	22	357	–	28	92	317	–	–	–	–
Part-time tuition	8	77	–	14	26	49	–	–	–	–
<b>Total</b>	<b>394</b>	<b>2,452</b>	<b>38</b>	<b>269</b>	<b>567</b>	<b>1,287</b>	<b>12</b>	<b>122</b>	<b>103</b>	<b>15</b>

Figure 4.11

### DISTRIBUTION OF STUDENTS ACCORDING TO THE DEGREE LEVELS (ALL MODES OF STUDY)



The percentage of graduate qualification papers within bachelor’s, diploma, and master’s degree programmes completed following a request from a company amounted to 14.1%. 10.6% of them were recommended for introduction into production.



The distribution of graduates within postgraduate academic staff training programmes is shown in Table 4.9.

Table 4.9

#### NUMBER OF GRADUATES BY EDUCATION PROGRAMMES AND INFORMATION ABOUT PHD THESIS DEFENCE

Research area	Number of graduates	Defended PhD theses (graduates of 2019)
Mathematics and Mechanics	10	1
Physics and Astronomy	14	4
Chemical Sciences	6	2
Geosciences	11	1
Biological Sciences	10	1
Informatics and Computer Facilities	11	0
Electronics, Radioengineering, and Communication Systems	1	0
Pharmacy	0	0
Psychological Sciences	2	0
Economics	9	0
Jurisprudence	8	0
Political Sciences and Regional Studies	0	0
Education and Pedagogical Sciences	0	0
Linguistics and Literary Studies	16	5
Historical Sciences and Archaeology	3	0
Philosophy, Ethics, and Religious Studies	2	0
Cultural Studies	2	0
<b>Total</b>	<b>105</b>	<b>14</b>
Of the total number of PhD students (number of foreign citizens)	14	2

In 2019, the first residents completed postgraduate academic staff training programmes and obtained postgraduate diplomas (residency degree). 15 people graduated from the speciality 38.08.02 Management and Economics of Pharmacy.



## 4.7. OVERVIEW OF NETWORK ACADEMIC PROGRAMMES

Network technologies, e-learning, and practice-oriented education programmes developed together with industrial partners are key trends of the education system today.

In the 2018/19 academic year, the following number of students completed programmes within existing networking education agreements:

- Programme “International Business (English language)”, specialisation 38.04.02 Management at the Faculty of International Relations of VSU (one student from the Southern Federal University).
- Programme “Human Resource Management in a Company”, specialisation 38.03.03 Human Resource Management at the Faculty of Economics of VSU (five students from MIREA – Russian Technological University).
- Programme “Russian Literature in the European Context”, speciality 45.04.01 Philology at the Faculty of Philology of VSU (one student from the University of Göttingen (Göttingen, Germany)).
- Programme “Business in the Emerging Markets”, speciality 38.04.01 Economics – 10 students from VSU at the Joanneum University of Applied Sciences (Graz, Austria).
- Programme “Business Communication in Economics: German Language”, speciality 45.04.01 Philology – 7 students from VSU at the Martin Luther University (Halle, Germany).

Programmes completed by students at the networking partner university are aimed at shaping students’ personal qualities, developing their speaking and writing skills in national and foreign languages, as well as improving the ability to adapt to different educational environments, and teaching methods.

## 4.8. OVERVIEW OF SCHOLARSHIP PROGRAMMES

University students have an opportunity to take part in different scholarship programmes which are aimed at supporting talented young people (Table 4.10).

Table 4.10

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

Scholarship programme	Number of scholarships for students
Scholarship of the President of the Russian Federation	3
Scholarship of the Government of the Russian Federation	1
Scholarship of the President of the Russian Federation in the priority areas	13
Scholarship of the Government of the Russian Federation in the priority areas	21
Scholarship of the Government of the Russian Federation in priority areas (for SVE)	11
Personal scholarship of Vladimir Potanin Charitable Foundation	3
Scholarship of the VSU Academic Board	4
Scholarship named after Professor L.D. Kokorev	2
Scholarship named after Professor G.F. Gorsky	2
Scholarship named after Professor I.A. Galagan	2
Scholarship named after Professor V.S. Osnovin	2
Scholarship named after Professor V.A. Panushkin	2
Scholarship named after Professor A.M. Abramov	1
Scholarship named after Professor M.G. Tochilin	2
Scholarship named after Professor V.A. Lisitsky	1
Scholarship named after Professor L.T. Gilyarovskaya	3
Scholarship named after Professor V.N. Eytinon	3
Scholarship named after Professor M. A. Krasnoselskiy	1
Scholarship named after Professor V.I. Sobolev	1
Scholarship named after Professor V.T. Titov	1
Scholarship named after Professor V.B. Kashkin	1
Scholarship named after Professor G.Ye. Vedel	1
Scholarship named after Professor G.Ya. Bayev	2
Scholarship named after Professor V.A. Artiomov	1
Scholarship of the data provider Informsvyaz-Chernozemye	1 semester (6) 2 semester (10)
Scholarship of "Concern Sozvezdiye"	4
Scholarship of the Oxford Russia Fund charity organisation	73



## 4.9. AN INTEGRATED EDUCATION AND INFORMATION SYSTEM AND ITS MAIN DEVELOPMENT TENDENCIES

An integrated education and information system is now an essential part of the educational process. The university's integrated education and information system is able to satisfy the demands of any user (students, teachers, staff members, and other users). This is one of the main criteria for assessing the system's effectiveness.

### OVERVIEW OF INFORMATIONAL SUPPORT AND MANAGEMENT OF THE EDUCATIONAL PROCESS

The "Electronic University VSU" web portal (<https://edu.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.

Students and the teaching staff can access their personal accounts from any PC or other electronic device connected to the Internet at any time. A service which automatically processes students' and teachers' requests for access permissions was launched.

"Electronic University VSU" portal is integrated with such information management systems as "Contingent", "Human Resources", "Curriculum", etc.

The portal includes the personal accounts of students and teaching staff which allow them to change their personal profiles, to upload documents, and to post them on the network.

The portal has special services for uploading, downloading, and posting the following documents regulating the educational process (the data in brackets shows the increment per year):

- 300 (+3) State Educational Standards
- 3,053 (+640) main academic programmes implemented by VSU
- 2,285 (+57) main academic programmes curricula
- 43 (+6) SVE academic programmes curricula
- 81,269 (+11,711) course syllabuses.

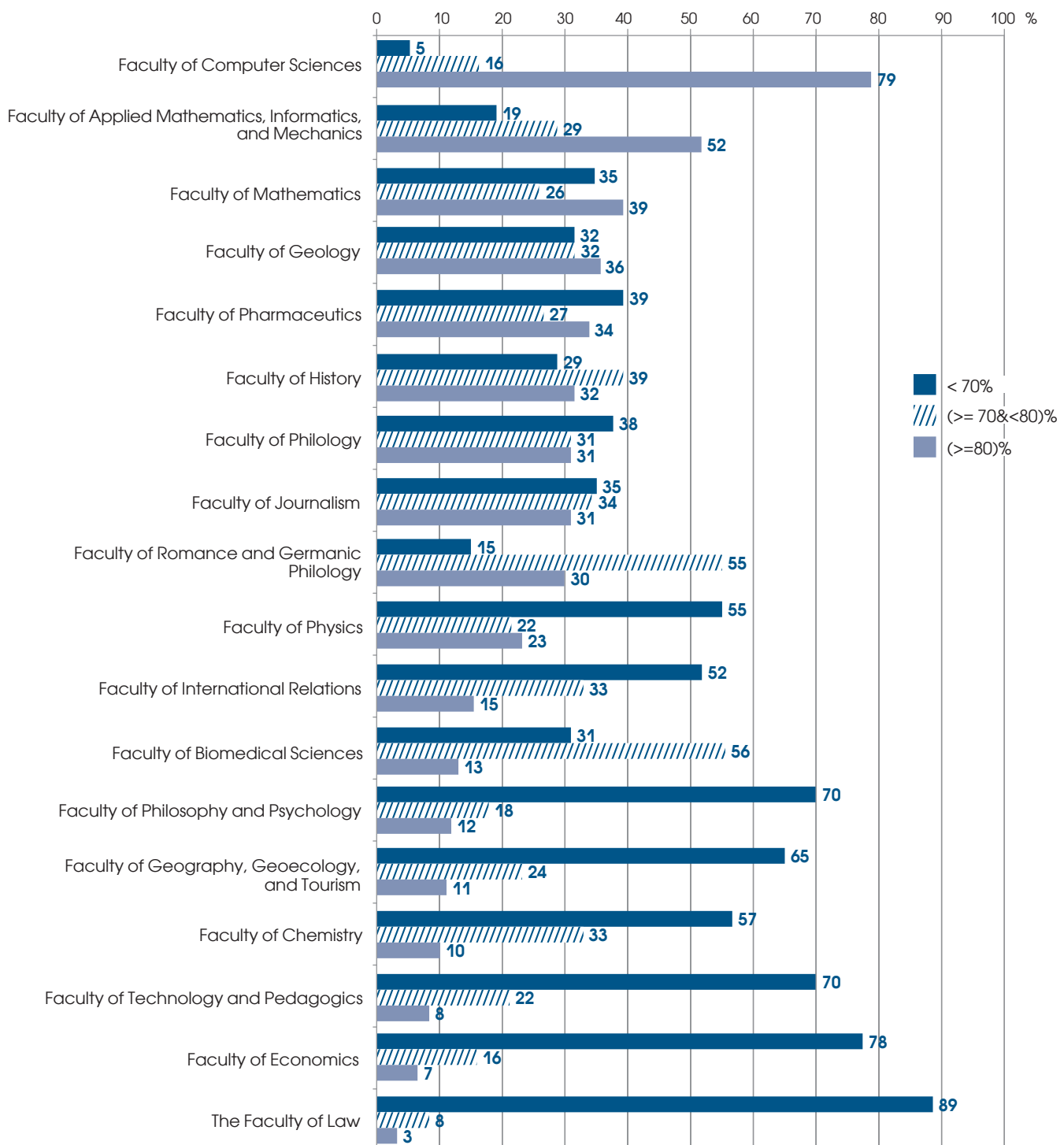
In 2019, the system "Design tool for syllabuses of main academic programmes" was developed and tested. The integration of the system with the VSU information system and a curricula database designed in the automated system "Curriculum" by OOO MMIS LAB makes it possible to automatically create syllabuses of disciplines and practice trainings, i.e. by incorporating information provided in the curriculum of the corresponding admission year (contact hours, hours of independent work, type of assessment, competencies shaped as a result of the course, etc.).



The portal has a service for uploading and downloading graduate qualification papers by undergraduate students and scientific reports and graduate qualification papers by postgraduate students, as well as checking these works in the Automated Antiplagiat system. In 2019, 13,668 works were uploaded. Figure 4.12 shows the average originality percentage of the works checked in the Antiplagiat system by faculties.

Figure 4.12

### ORIGINALITY PERCENTAGE OF GRADUATE QUALIFICATION PAPERS BY FACULTIES



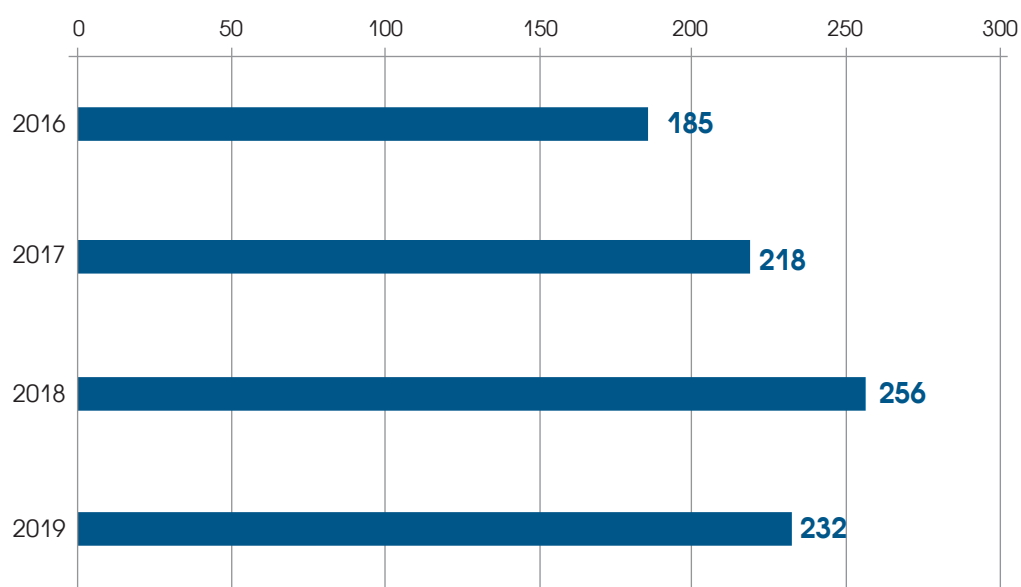
## TEACHING INNOVATIONS “ELECTRONIC UNIVERSITY VSU” PORTAL, AN ENVIRONMENT FOR E-LEARNING AND DISTANCE LEARNING TECHNOLOGIES

The e-courses registered on the portal include all the components of the educational process: study materials, assessment tools, as well as communication and control facilities. It is possible to organise the study material in various ways. The interactive tools allow any type of academic activities to be implemented electronically as well as control and assessment methods.

At present, the number of all e-courses registered on the “Electronic University VSU” portal with at least 5 educational resources of any kind totals over 1,200. 450 of them were used in the educational process in 2019 (data is based on the number of requests made by students). Fig. 4.13 shows the dynamics of applications submitted by lecturers to create new e-courses.

Figure 4.13

### DYNAMICS OF E-COURSES UPDATE ON THE “ELECTRONIC UNIVERSITY VSU” PORTAL



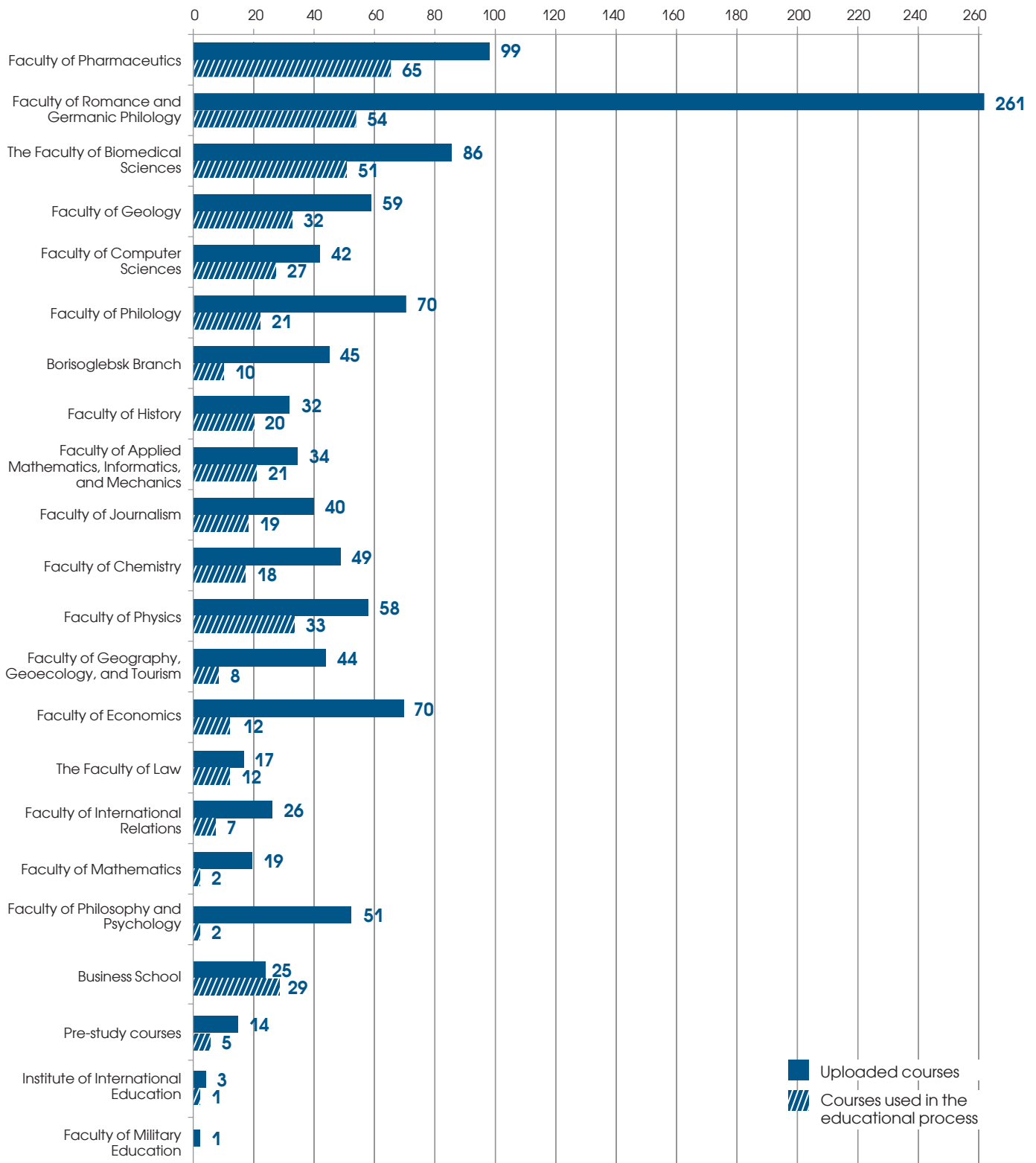
The total number of students' requests to access e-courses was over 5.1 million over the year (the increment per year was 1.7 million requests).



Fig. 4.14 shows the number of e-courses with at least 5 educational resources of any kind and the level of their engagement in the educational process (number of students' requests over the year).

Figure 4.14

### DISTRIBUTION OF THE E-COURSES ACCORDING TO FACULTIES

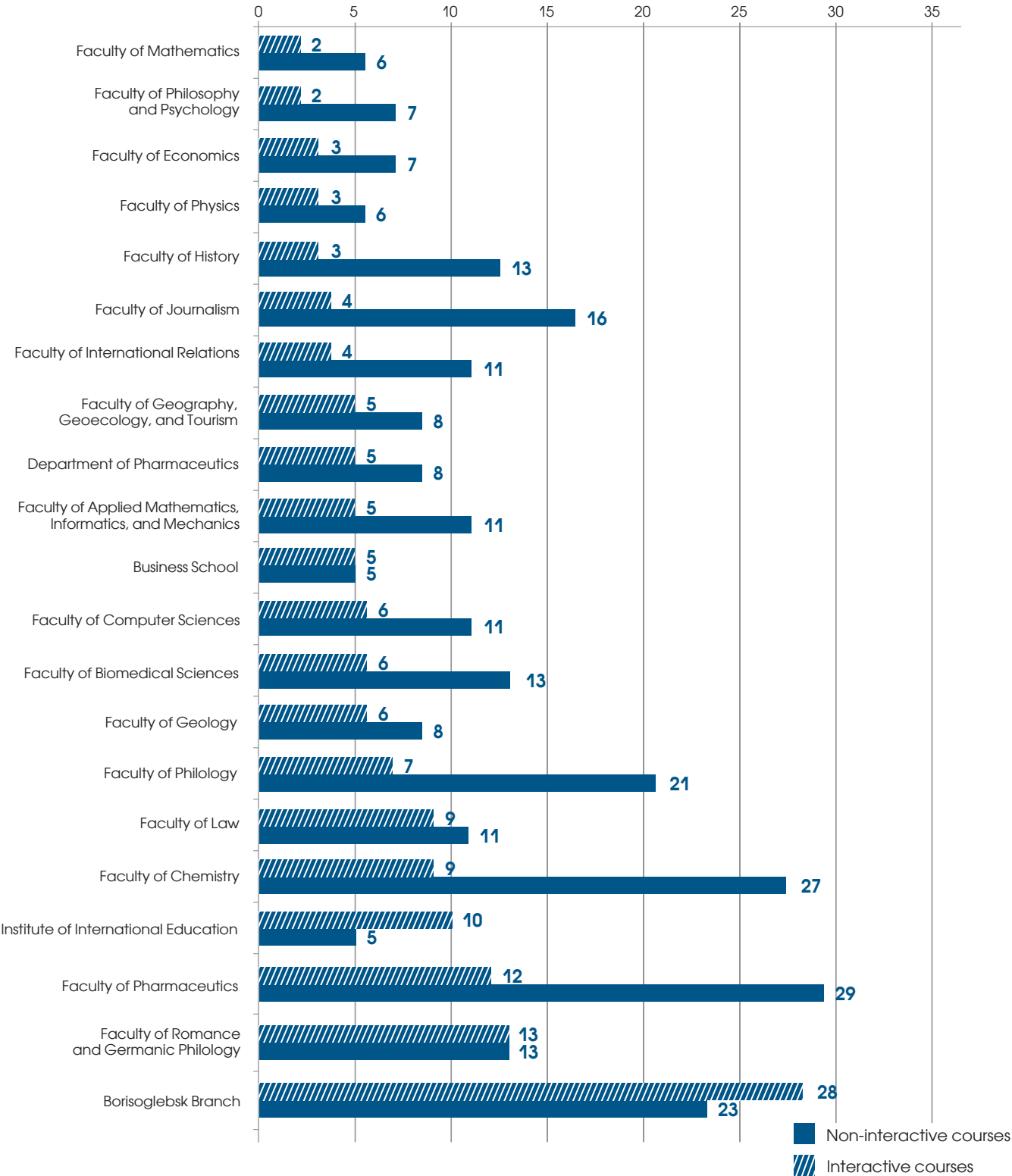




The pedagogical level of the e-courses can be indirectly characterised by the number of interactive tools requiring students to perform certain activities that can be assessed by the teacher (fig. 4.15).

Figure 4.15

AVERAGE NUMBER OF INTERACTIVE AND NON-INTERACTIVE COURSES WITHIN COURSES OF THE FACULTY





In accordance with regulation "P VSU 0.0.19 – 2017 Regulation regarding acknowledgement of e-courses on the educational portal "Electronic University VSU" e-courses on the "Electronic University VSU" portal are acknowledged as teaching aids of Voronezh State University. In 2019, this status was assigned to 85 e-courses (in 2018 it was 36 courses).

Teachers make active use of the distance learning course "E-Learning and Distance Learning Technologies in the Educational Process" developed for the advanced training programme for academic staff members (24 hours). In 2019, 154 teachers used the course. 130 of them received participation certificates for the programme. 10,797 requests per year also proves that the e-course materials are being actively used.

Another sign of successful introduction of e-learning into the educational process is the master's programme "Teaching Foreign Languages with the Help of Online Technologies" implemented at the Faculty of Romance and Germanic Philology.

To provide a fair view of e-courses in respect of them being updated with educational components or used by students, a statistics system was created allowing courses to be rated by various criteria.

Massive open online courses (MOOC) are being actively developed at VSU. In 2019, a special subdivision, the Department of E-learning and Distance Learning Technologies, was established to provide for these activities. Staff were recruited to provide technical and methodological support of MOOCs at the university and extra equipment was purchased to make it possible to shoot high quality video lectures to fit the requirements of the MOOC format. In 2019, 15 faculties submitted over 20 applications to create MOOC e-courses.

By the end of 2019, the production of 8 MOOCs was completed. The courses are now being tested by VSU students at the website <https://mooc.vsu.ru> based on the LMS platform Moodle.

In the reporting year, three university staff members completed a professional retraining programme in the area of e-learning and distance learning technologies at the Moscow Institute of Physics and Technology (National Research University) (288 academic hours) and received certificates which entitle them to professional activity in the area of e-learning and distance learning technologies.

Within the framework of the national project "Modern electronic education environment in the Russian Federation", VSU signed a partnership agreement with Saint Petersburg National Research University of Information Technologies, Mechanics, and Optics. The agreement will provide for the integration of educational resources created at the university within the electronic education environment of the Russian Federation and access to information about students' academic performance available on various online platforms.

## 4.10. GENERAL INFORMATION ABOUT THE SECONDARY VOCATIONAL EDUCATION PROGRAMMES IMPLEMENTED AT VSU IN 2019

In 2019, the university implemented primary-level programmes, designed for secondary vocational education specialists, within six Federal State Educational Standards including 09.02.03 Programming in Computer Systems (basic level); 31.02.04 – Optical Eyecare (advanced level); 33.02.01 Pharmacy (basic level); 38.02.01 Economics and Accounting (area-based) (basic level); 42.02.01 Advertising (basic level); and 43.02.10 Tourism (basic level).

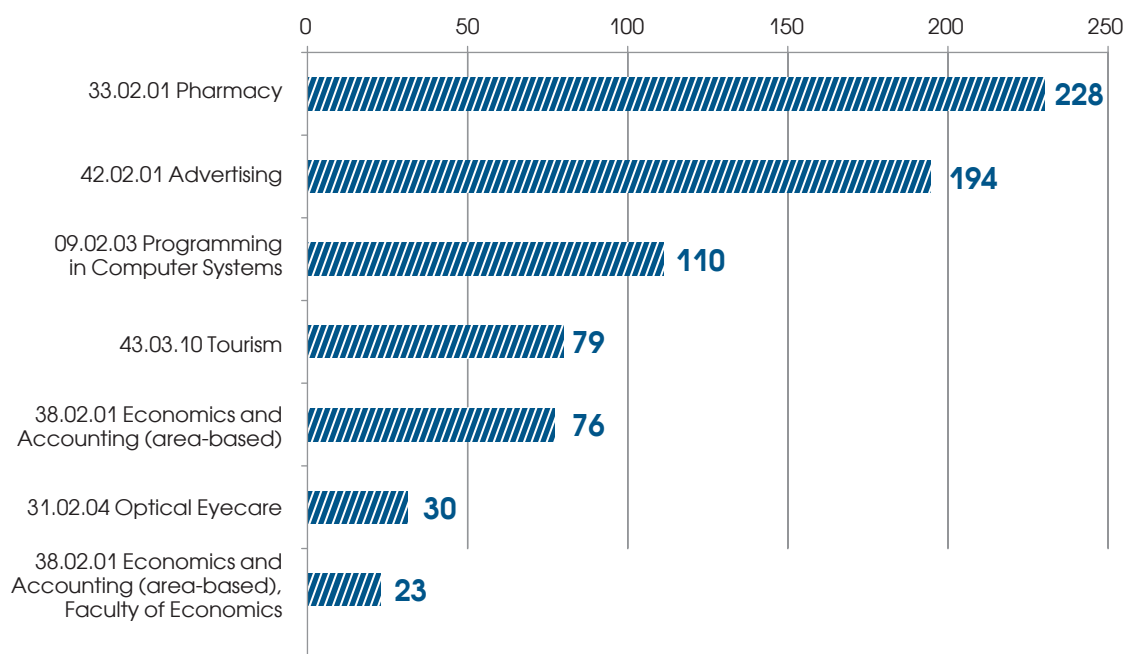
The Faculty of Economics launched the academic programme in the speciality 38.02.01 Economics and Accounting (area-based).

In 2019, state-funded places for speciality 33.02.01 “Pharmacy” were allocated for the first time.

The number of international students admitted to SVE is now 740. Figure 4.16 shows their distribution by programmes.

Figure 4.16

### DISTRIBUTION OF STUDENTS ACCORDING TO SECONDARY VOCATIONAL EDUCATION PROGRAMMES

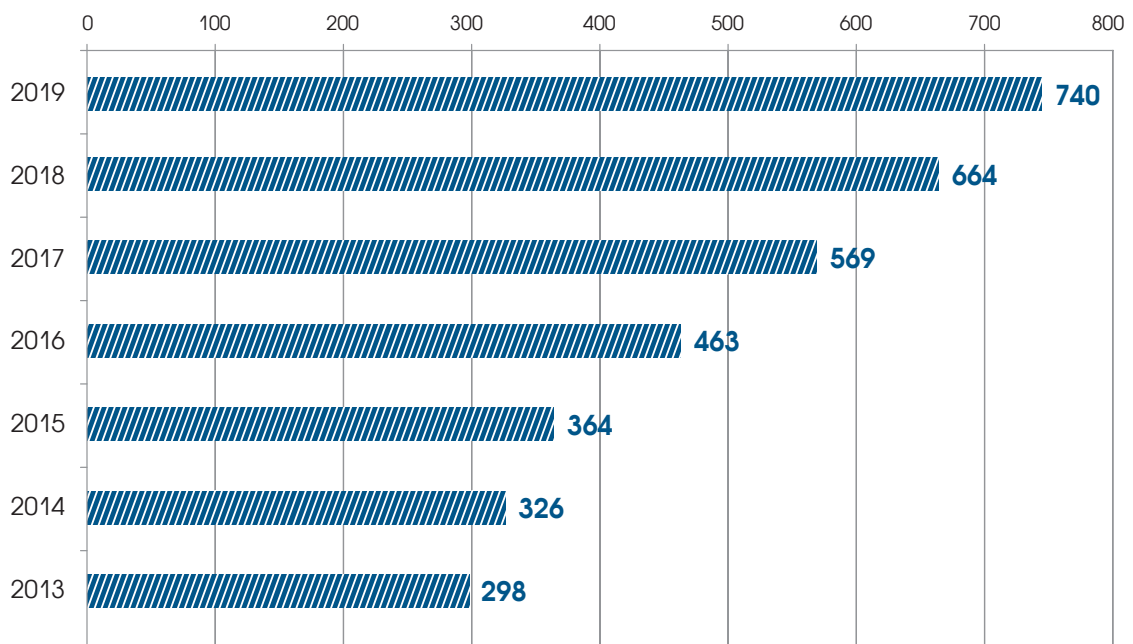


# 4

The dynamics in the number of students completing secondary vocational education programmes is generally positive, with the number of students having increased by 56% over the last five years (Fig. 4.17).

Figure 4.17

## DYNAMICS OF THE NUMBER OF STUDENTS ACCORDING TO SECONDARY VOCATIONAL EDUCATION PROGRAMMES IN 2013–2019



The grade point average (GPA) of students enrolled in the following secondary vocational education programmes was above the nationwide GPA which amounted to 3.73: Pharmacy (4.35), Tourism (4), Economics and Accounting (area-based) (4.36), Advertising (4.15), and Programming in Computer Systems (4.05).





In 2019, the number of graduates of the secondary vocational education programmes totalled 122, including 12 students who graduated with honour degrees (Table 4.11).

Table 4.11

### GRADUATION RESULTS OF STUDENTS ACCORDING TO SECONDARY VOCATIONAL EDUCATION PROGRAMMES IN 2019

Secondary vocational education speciality	Number of graduates	Results			
		With Honours degree	With an excellent mark for thesis defence	With a good mark for thesis defence	With a satisfactory mark for thesis defence
09.02.03 Programming in Computer Systems	5	1	4	1	0
33.02.01 Pharmacy	20	0	3	13	4
38.02.01 Economics and Accounting (area-based)	35	2	5	14	16
42.02.01 Advertising	33	8	21	6	6
43.03.10 Tourism	29	1	6	18	5
<b>Total</b>	<b>122</b>	<b>12</b>	<b>39</b>	<b>52</b>	<b>31</b>

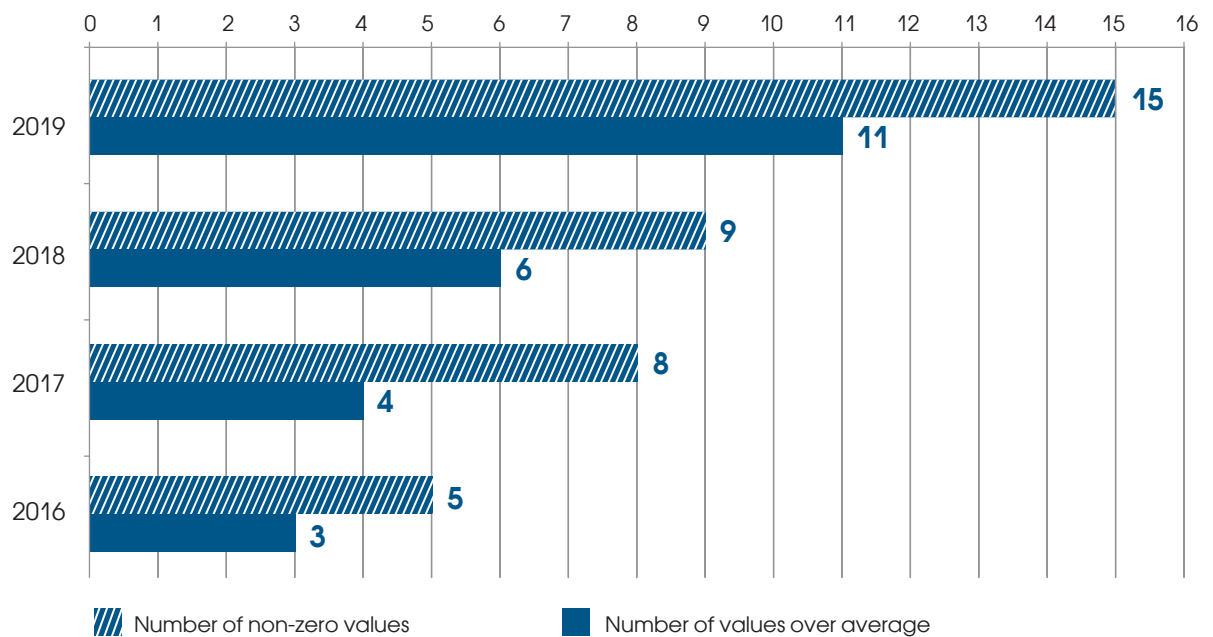
In 2019, the Monitoring of the Quality of Specialists Training in Educational Organisations Implementing Secondary Vocational Education Programmes (SVE Monitoring) demonstrated that VSU's performance in the field of educational activity, infrastructure development, financial and economic activities, staff, employment of graduates of secondary vocational education programmes, and social responsibility was above average. As a result, Voronezh State University was included in the Top 10 educational organisations implementing secondary vocational education programmes of the Voronezh Region and Top 500 educational organisation of the Russian Federation. The performance of Voronezh State University among educational organisations of the Russian Federation was above average within the industry-specific group.

The dynamics of SVE Monitoring in 2016-2019 is shown in fig. 4.18. According to the results of the monitoring, in the reporting period Voronezh State University improved its position as to the normalised contingent by eleven points among the educational institutions of the Voronezh Region implementing secondary vocational education programmes.



Figure 4.18

### QUANTITATIVE RESULTS OF THE SVE MONITORING



In 2019, 11 VSU students studying secondary vocational education programmes were awarded Russian Federation Government Scholarships for 2019/20 in top-priority areas of modernisation and technological development of the economy of the Russian Federation. The number of the quotas was increased by 5 as compared to 2018. The scholarships were awarded to 5 students of the speciality 33.02.01 Pharmacy, 3 students of the speciality 09.02.03 Programming in Computer Systems, and 3 students of the speciality 31.02.04 Optical Eyecare.

For the second year in a row, a team from Voronezh State University took part in the regional championship WorldSkills Russia of the Voronezh Region in the area "Programming Solutions for Business" and for the first time in the area "Graphic Design". Voronezh State University was represented by students completing programmes in specialities 09.02.03 Programming in Computer Systems and 42.02.01 Advertising. They had very good results: 440 and 462 respectively (out of a possible 500).



## 4.11. EDUCATION QUALITY ASSESSMENT SYSTEM

The assessment of the quality of the university's education includes an internal assessment and an external independent expert evaluation of the quality of education 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, the education quality monitoring within the main academic programmes is conducted by means of current, midterm, and final assessments.

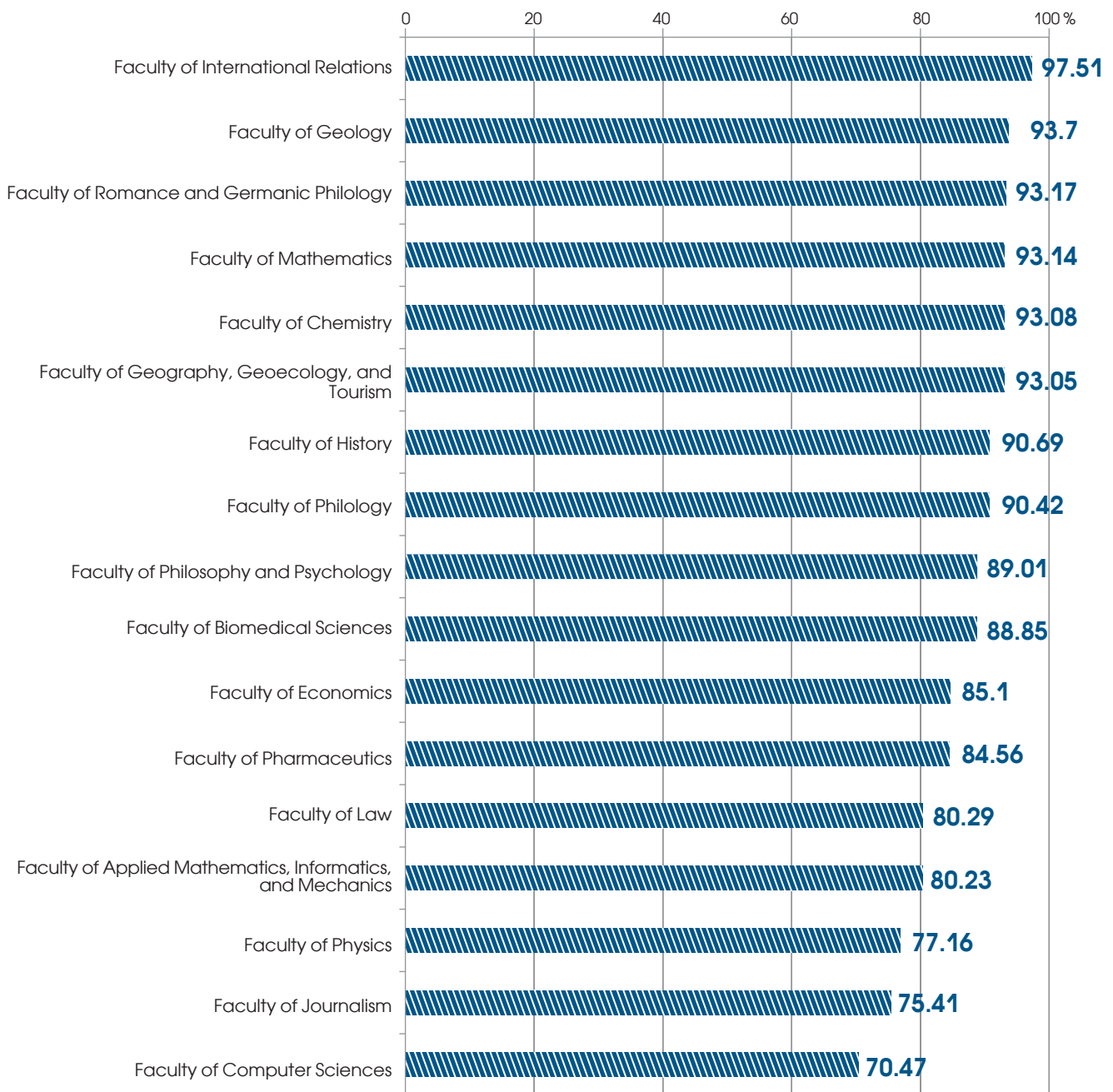
In the 2018/19 academic year, 15,755 students (95.43%) took the mid-year examinations. 84.93% of the students managed to pass them with a good mark, which exceeded the rate of the previous mid-year examinations by 5.31%.

Academic performance by faculties and with allowance for attempts to re-sit the examinations is shown in Figure 4.19.



Figure 4.19

ACADEMIC PERFORMANCE OF ALL UNIVERSITY STUDENTS  
IN THE END-OF-YEAR EXAMINATIONS IN THE 2018/19 ACADEMIC YEAR  
ACCORDING TO FACULTIES





The best academic performance among bachelor's programmes was demonstrated by the students of the Faculty of International Relations (97.34%) and the worst by the Faculty of Computer Sciences (69.5%). The average grade among bachelor's degree students was 83.82%.

All diploma degree students at the Faculty of Computer Sciences and the Faculty of Law passed their exams with a good mark. The worst academic performance was demonstrated by the students from the Faculty of Pharmaceutics (84.44%). The average grade among diploma degree students was 91.97%.

The best academic performance among future master's degree students was at the Faculty of International Relations (98.04%) and the worst at the Faculty of Economics (66.39%). The average performance among master's degree students was 82.73%.

Among primary-level programmes, the Faculty of Physics had the best academic performance (100%) and the Faculty of Pharmaceutics had the worst (82.84%). The average grade among SVE students was 90.28%.

Among full-time students, the best academic performance was demonstrated by the students of the Faculty of Geography, Geoecology, and Tourism, (98.75%), the Faculty of International Relations (97.65%), and the Faculty of Economics (97.13%), the worst by the Faculty of Law (56.6%) and the Faculty of Computer Sciences (70.47%).

All full-time students from the Faculty of Romance and Germanic Philology passed their mid-year exams with a good mark, whereas the Faculty of Physics demonstrated the worst results (37.5%).

Among extramural students, the leading position in terms of academic performance was taken by the students from the Faculty of Philosophy and Psychology (97.56%) and the Faculty of International Relations (95.74%). The Faculty of Journalism (extramural studies) had the worst academic performance (38.46%).

In the 2018/19 academic year, the average grade for the mid-year examinations amounted to 4.01, which was 0.03 higher than the figure of the previous mid-year examinations. The highest average mark was demonstrated by the students of the Faculty of Philology (4.24) and the Faculty of Romance and Germanic Philology (4.23), whereas the Faculty of Mathematics had the lowest average mark (3.71).

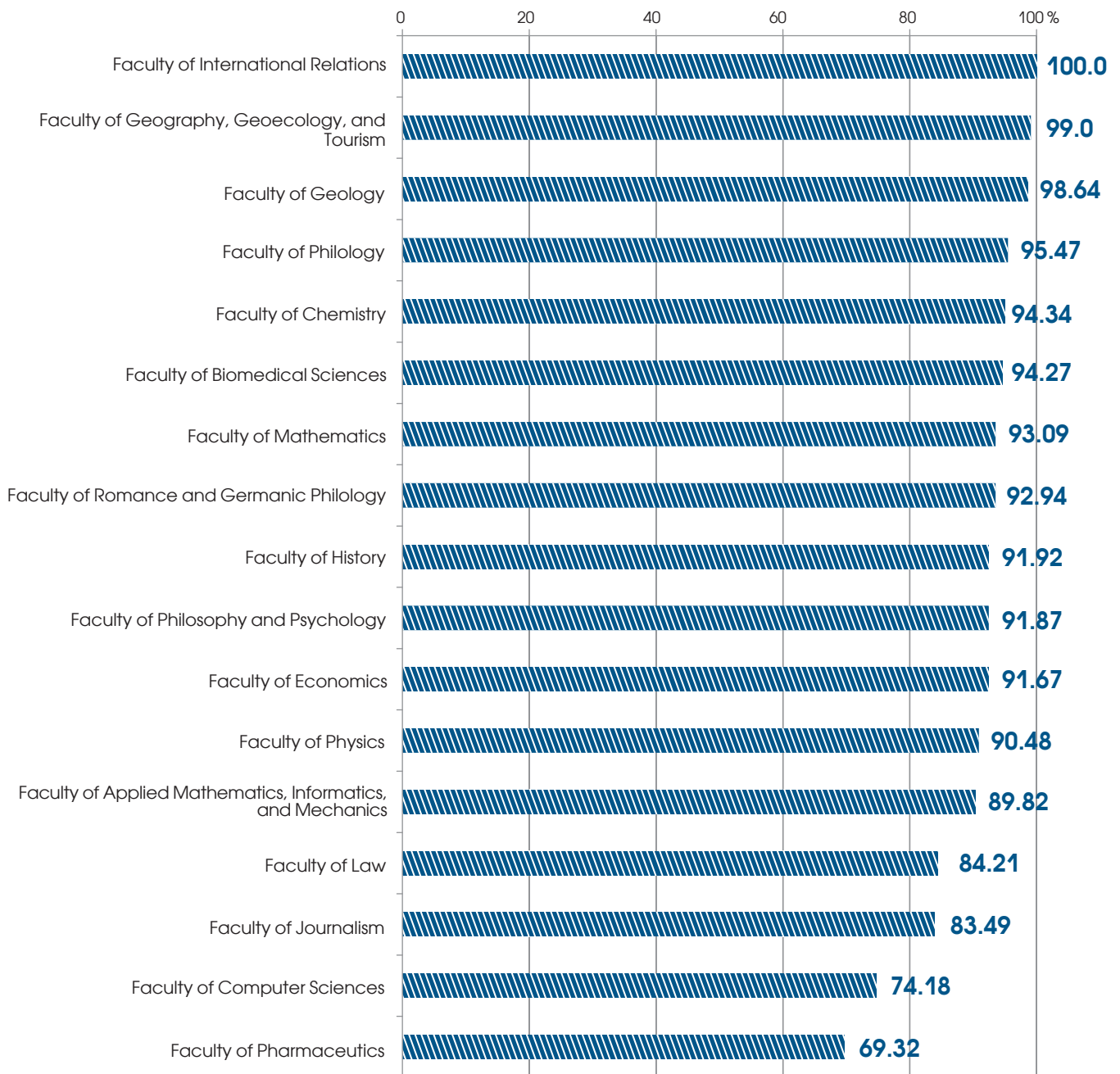
In the 2018/2018 academic year, 14,121 students (90.26%) took the end-of-year examinations. 89.19% of the students managed to pass them with a good mark, which exceeded the rate of the previous mid-year examinations by 3.15%.

Academic performance by faculties and with allowance for attempts to re-sit the examinations is shown in fig. 4.20.



Figure 4.20

### ACADEMIC PERFORMANCE OF ALL UNIVERSITY STUDENTS IN THE MID-YEAR EXAMINATIONS IN THE 2018/19 ACADEMIC YEAR ACCORDING TO FACULTIES





The best academic performance among bachelor's programmes was demonstrated by the students of the Faculty of Geography, Geoecology, and Tourism and the Faculty of International Relations (100%) and the worst by the Faculty of Computer Sciences (70.97%). The average grade among bachelor's degree students was 90.99%.

All diploma degree students at the Faculty of Journalism and the Faculty of Law passed well their exams. The worst academic performance was demonstrated by the Faculty of Pharmaceutics (67.34%). The average grade among diploma degree students was 88.54%.

The best academic performance among master's degree students was at the Faculty of International Relations, the Faculty of Geology, and the Faculty of History (100%). The academic performance at The Faculty of Law and the Faculty of Economics was below the average (68.59% and 76.95% respectively). The average performance among master's degree students was 84.32%.

Among primary-level programmes, the best academic performance was demonstrated by the students from the Faculty of Physics (100%) and the worst from the Faculty of Mathematics (69.29%). The average grade among SVE students was 82.35%.

Among full-time students, the best academic performance was demonstrated by the students of the Faculty of International Relations (100%), the Faculty of Geography, Geoecology, and Tourism, (99.72%), and the Faculty of Philology (99.16%), the worst by the Faculty of Pharmaceutics (63.66%) and the Faculty of Computer Sciences (74.18%).

All full-time students from the Faculty of Romance and Germanic Philology, the Faculty of Pharmaceutics, and the Faculty of Economics passed their end-of-year exams with good marks. Over half of the students from the Faculty of Physics (51.52%) did not pass their exams.

All full-time students from the Faculty of Geography, Geoecology, and Tourism, the Faculty of International Relations, and the Faculty of Pharmaceutics passed their exams with good marks. The Faculty of Journalism (extramural studies) had the worst academic performance (46.29%).

In the 2018/19 academic year, the average grade for the end-of-year examinations amounted to 4.05, which was higher than the figure of the previous end-of-year examinations by 0.01. The Faculty of Philosophy and Psychology had the highest average mark (4.4) and the Faculty of Physics (3.79) had the lowest average mark.



All stakeholders of the educational process are annually surveyed in order to identify the level of satisfaction with the quality of education. In 2019, the survey was participated in by 1,626 students. According to the results of the survey, the level of satisfaction of students remained stable (0.51 index, which is a 0.01 increase as compared to 2018) (Table 4.12).

Table 4.12

### SATISFACTION OF VSU STUDENTS WITH EDUCATIONAL PROCESS ELEMENTS IN INDICES IN 2019

Assessed elements of the educational process	Average at the university*
Satisfied with education at VSU	+ 0.51
Satisfied with the chosen specialisation	+ 0.5
Timetable (number of classes per day, gaps, etc.)	+ 0.36
Facilities (laboratory, multimedia equipment, their availability, etc.)	+ 0.34
Availability and sufficient number of printed text books and study guides	+ 0.46
Availability and sufficient number of electronic text books and study guides	+ 0.54
Level of teaching compulsory courses (application of new methods, interactivity, etc.)	+ 0.61
Level of teaching specialised courses (application of new methods, interactivity, etc.)	+ 0.64
Content of specialised courses	+ 0.61
Content of compulsory courses	+ 0.65
Level of teaching elective courses (application of new methods, interactivity, etc.)	+ 0.52
Level of teaching Physical Education	+ 0.51
Opportunity to choose specialised elective courses	+ 0.27
Attitude to students shown by the personnel of the dean's office	+ 0.47
Attitude to students shown by the educational support personnel (laboratory technicians, supervisors)	+ 0.69
Attitude to students shown by the library personnel	+ 0.76
Attitude to students shown by the lecturers of the same faculty	+ 0.77
Attitude to students shown by the lecturers of other faculties	+ 0.59
Access to computer software and its quality	+ 0.38
Availability of places in classrooms, condition of classrooms	+ 0.34
General assessment of the educational process	+ 0.60
Catering services in the University building (opening hours, prices, range of dishes, quality of food, etc.)	-0.1
Medical care and health services (health unit opening hours)	-0.24

\* The range of indices is within -1 and +1, where "+1" is the highest point of satisfaction and "-1" is the lowest.



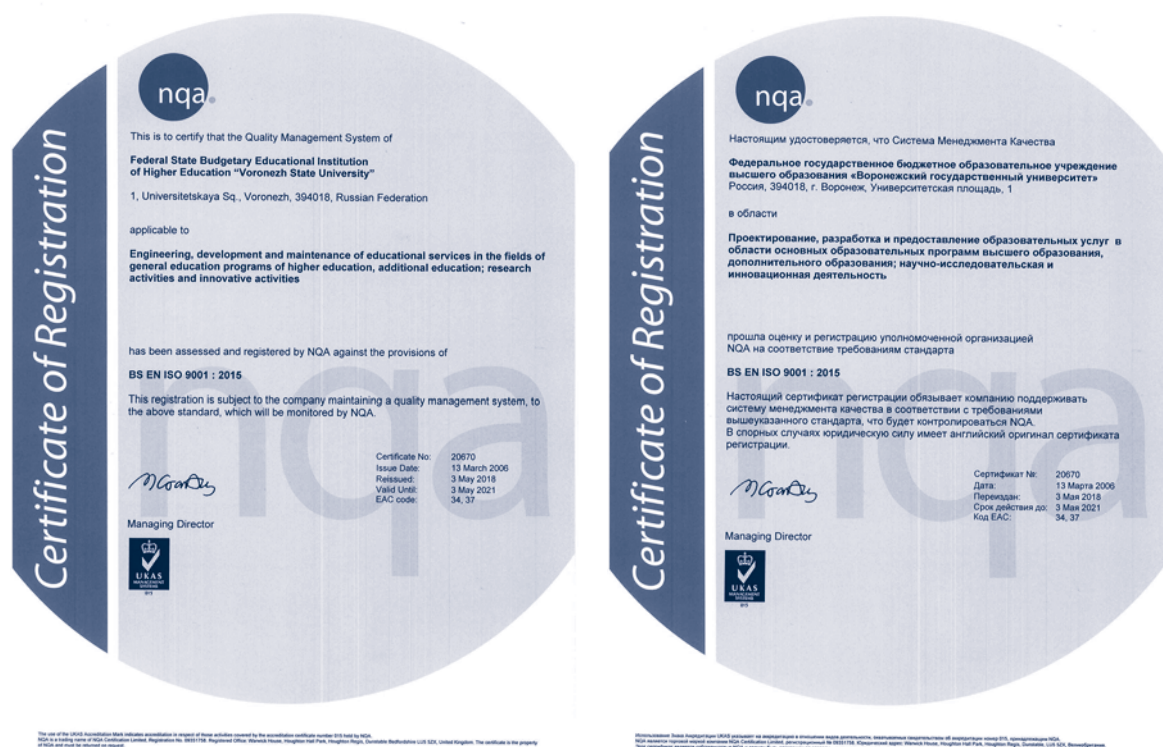


The students, as usual, highly praised the attitude shown by the teaching staff at their faculties. It should be noted that there is an increase in the level of student satisfaction with the availability of electronic text books and study guides. All in all, as of 2019, despite stability in some aspects, there is a decrease in the level of student satisfaction with the availability of places in classrooms, classrooms for independent work, and the condition of classrooms. Students gave low ratings to the university’s catering services and the quality of medical and health services.

VSU has used the quality management system for over 10 years, which allows maintaining the quality of management in accordance with international standards. The current certificate confirms compliance with the international standard ISO 9001:2015 in the following areas: designing, developing, and providing educational services in the area of main higher education and further education programmes, research, and innovative activities (fig. 4.21).

Figure 4.21

**QUALITY CERTIFICATE BY THE INTERNATIONAL COMPANY NQA (NATIONAL QUALITY ASSURANCE, UK)**



# 4

In 2019, VSU won the contest “Voronezh Quality”, a local stage of the All-Russian contest of the “100 Best Russian Products” contest (fig.4.22). The organisers of the contest (the government of the Voronezh region, the Voronezh Centre for Standardisation and Metrology, and Regional Quality Commission) assessed educational services by such criteria as their quality, safety, attractiveness, functional acceptability, cost, etc.

Figure 4.22

## RESULTS OF THE UNIVERSITY’S PARTICIPATION IN THE REVIEW CONTEST “VORONEZH QUALITY” IN 2019



In 2019, 7 faculties successfully passed professional and public accreditation, and 62 educational programmes received certificates (table 4.13).

Table 4.13

### LIST OF EDUCATIONAL PROGRAMMES THAT RECEIVED CERTIFICATES OF PROFESSIONAL AND PUBLIC ACCREDITATION IN 2019

Faculty	Field of study
<b>Union "Chamber of Commerce and Industry of the Voronezh Region" (www. http://tppvo.ru)</b>	
Faculty of Geography, Geoecology, and Tourism	05.03.02 – Geography, field of study: Physical Geography and Landscapes Studies 05.03.02 – Geography, field of study: Economic and Social Geography
Faculty of Journalism	42.02.01 – Advertising 42.03.01 – Advertising and Public Relations 42.03.01 – Advertising and Public Relations, module: Advertising and Public Relations in Mass Media
Faculty of Biomedical Sciences	06.03.01 – Biology, field of study: Biochemistry 06.03.01 – Biology, field of study: Physiology 30.05.03 – Medical Cybernetics 30.05.01 – Medical Biochemistry
Faculty of Romance and Germanic Philology	45.03.02 – Linguistics 45.03.03 – Fundamental and applied linguistics
<b>National Association of Telecommunication Companies "Quality control for infocommunications"</b>	
The Faculty of Journalism	42.03.02 – Journalism, field of study: Internet and Press 42.03.02 – Journalism, field of study: Journalism 42.03.04 – Television, field of study: Television documentary 42.03.02 – Journalism, field of study: Mass Media and the Internet 42.03.02 – Journalism, field of study: TV and Radio Functioning Process
Faculty of Applied Mathematics, Informatics, and Mechanics	01.03.02 – Applied Mathematics and Informatics, field of study: Mathematical and Computer-Aided Methods of Solving Natural Science Problems 01.03.02 – Applied Mathematics and Informatics, field of study: Mathematical Modelling and Computational Mathematics 01.03.02 – Applied Mathematics and Informatics, field of study: Automatic Systems for Information Processing and Management 01.03.02 – Applied Mathematics and Informatics, field of study: System Programming and Computer Technologies 01.03.02 – Applied Mathematics and Informatics, field of study: Information Technologies for Data Analysis, Modelling, and Decision-Making 01.03.02 – Applied Mathematics and Informatics, field of study: Software Engineering

Faculty	Field of study
Faculty of Applied Mathematics, Informatics, and Mechanics	01.03.03 – Mechanics and Mathematical Modelling, field of study: Solid and Medium Mechanics
	01.03.03 – Mechanics and Mathematical Modelling, field of study: Mathematical Modelling and Computer-Aided Engineering
	02.04.03 – Mathematical Support and Administration of Information Systems, field of study: Information Systems and Databases
	38.03.05 – Business Informatics, field of study: Enterprise Architecture
	09.03.03 – Applied Mathematics and Informatics, field of study: Applied Computer Science in Jurisprudence
	01.04.02 – Applied Mathematics and Informatics, field of study: Information Technologies and Economic Activities
	01.04.02 – Applied Mathematics and Informatics, field of study: Computer Technologies for the Problems of Mathematical Physics, Optimisation, and Management
	01.04.02 – Applied Mathematics and Informatics, field of study: Mathematical Support and Software for Information Systems
	01.04.02 – Applied Mathematics and Informatics, field of study: Mathematical Basis and Computer Graphics Programming
	02.04.02 – Fundamental Informatics and Information Technologies, field of study: Machine Learning and Intelligent Information Technologies
	02.04.02 – Fundamental Informatics and Information Technologies, field of study: Mobile Applications Development Technologies
	01.04.03 – Mechanics and Mathematics and Mathematical Modelling, field of study: Applied Mechanics and Computer Modelling
	02.04.03 – Mathematical Support and Administration of Information Systems, field of study: Management of the Design and Department of Information Systems
	Faculty of Economics
38.04.01 – Economics, field of study: Accounting, Analysis, and Audit	
<b>Non-profit autonomous organisation “International Academy of Management and Quality of Business”</b>	
Faculty of Economics	38.03.01 – Economics, field of study: Business Economics
	38.04.01 – Economics, field of study: Accounting, Analysis, and Audit
<b>All-Russian public organisation “Association of Russian Lawyers”</b>	
Faculty of Law	40.03.01 – Jurisprudence
	40.04.01 – Jurisprudence, field of study: Conventional law
	40.04.01 – Jurisprudence, field of study: Protection of Human Rights and Freedoms
	40.04.01 – Jurisprudence, field of study: Corporate Attorney
	40.04.01 – Jurisprudence, field of study: Criminalistics, Operational Investigations, Judicial, and Advocate Activities
	40.04.01 – Jurisprudence, field of study: International Law and Business
	40.04.01 – Jurisprudence, field of study: Tax and Financial Law
	40.04.01 – Jurisprudence, field of study: Taxation and Civil Legislation

End of table 4.13

Faculty	Field of study
Faculty of Law	40.04.01 – Jurisprudence, field of study: Organisation of the Judicial Power and Law Enforcement Activities
	40.04.01 – Jurisprudence, field of study: Judicial and Non-Judicial Forms of Civil Rights Protection
	40.04.01 – Jurisprudence, field of study: Theory and History of State and Law
	40.04.01 – Jurisprudence, field of study: Criminal Procedure
	40.04.01 – Jurisprudence, field of study: Legal Defence in Administrative and Administrative Procedure Law
	40.04.01 – Jurisprudence, field of study: Lawyer in the Field of Labour, Social, and Land Law
	40.04.01 – Jurisprudence, field of study: Public Authority Attorneys
	40.04.01 – Jurisprudence, field of study: Administrative Law, Administrative Procedure
	40.06.01 – Jurisprudence, field of study: Civil and Arbitration Procedures
	40.06.01 – Jurisprudence, field of study: Constitutional Law, Constitutional Proceedings, Municipal Law
	40.06.01 – Jurisprudence, field of study: Criminalistics, Operational Investigations, Judicial, and Expert Activities
	40.06.01 – Jurisprudence, field of study: International Law; European Law
	40.06.01 – Jurisprudence, field of study: Theory and History of State and Law, History of State and Law Studies
	40.06.01 – Jurisprudence, field of study: Labour Law and Social Security Law
	40.06.01 – Jurisprudence, field of study: Criminal Law and Criminology; Criminal and Penal Law
	40.06.01 – Jurisprudence, field of study: Criminal Procedure
	40.06.01 – Jurisprudence, field of study: Finance Law, Tax Law, and Budget Law

In 2019, VSU took part in the independent assessment of the quality of student training in higher education organisations conducted by the Federal Service for the Supervision of Education and Science. All in all, over 300 students of the following training programmes were assessed: 05.03.02 – Geography, 05.03.01 – Geology, 46.03.01 – History, 41.03.01 – International regional studies, 02.03.01 – Mathematics and computer sciences, 37.03.01 – Psychology, 38.03.01 – Economics, 02.03.02 – Fundamental informatics and information technologies, 06.03.01 – Biology, 04.03.01 – Chemistry, 03.03.02 – Physics. The aim was to assess the level of development of various cultural competencies in their knowledge component. The students demonstrated the objectiveness of the assessment of the knowledge they got at VSU.



In the reporting year, the Federal online examination for the graduates of bachelor's programmes of the universities of Voronezh and the Voronezh region was held at Voronezh State University. Today, the Federal online examination for the graduates of bachelor's programmes is an external independent certification of the graduates of bachelor's programmes assessing the compliance with the requirements of the Federal State Educational Standards. The examination is considered relevant in accordance with the law "On Education in the Russian Federation". As a result of successful Federal online examination for the graduates of bachelor's programmes, the students of the Faculty of History doing the programme 39.03.01 – Sociology and the students of the Faculty of Biomedical Sciences and the Faculty of Geography, Geoecology, and Tourism doing the programme 05.03.06 – Ecology and Natural Resource Management were awarded with personal certificates. Over 50% of the students received a personal certificate of the gold, silver, or bronze level (fig. 4.23).

Figure 4.23

### QUALITY CERTIFICATE OF THE FEDERAL ONLINE EXAMINATION FOR THE GRADUATES OF BACHELOR'S PROGRAMMES



## 4.12. QUANTITATIVE AND QUALITATIVE DATA ON FURTHER EDUCATION

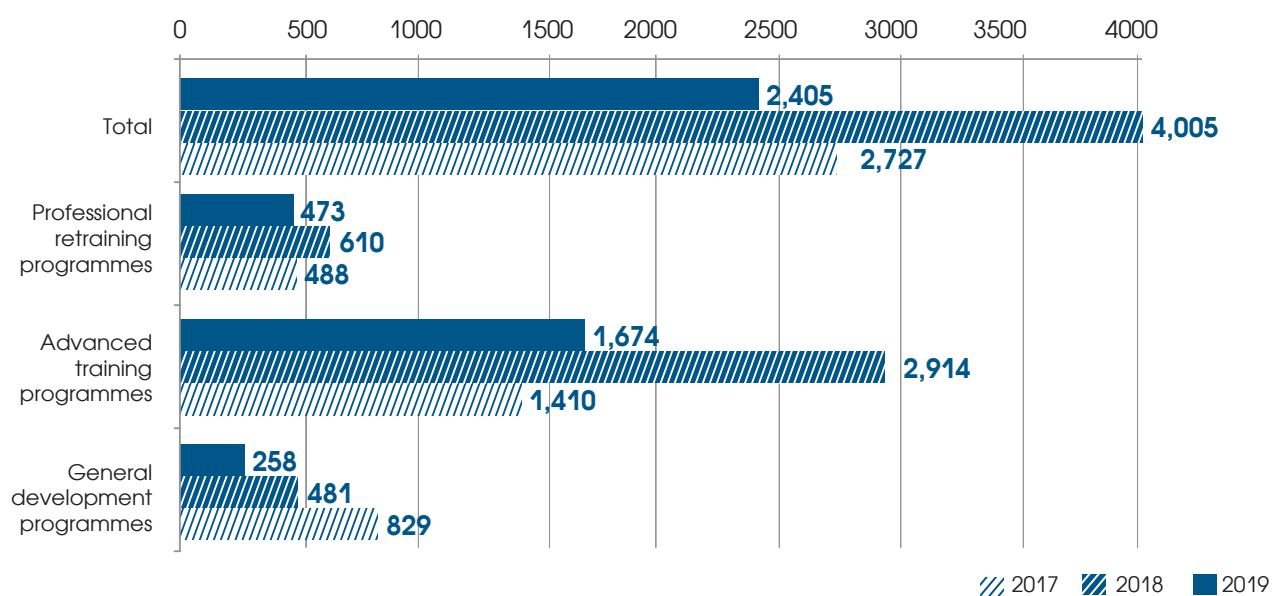
In 2019, 93 further education programmes were implemented at VSU, including:

- 21 general development programmes with 258 students.
- 45 advanced training programmes with 1,674 students.
- 27 professional retraining programmes with 473 students, of whom 223 obtained a new profession.

The dynamics of the number of students on further education programmes is presented in fig. 4.24.

Figure 4.24

### GROWTH DYNAMICS OF THE NUMBER OF STUDENTS AT FURTHER EDUCATION PROGRAMMES



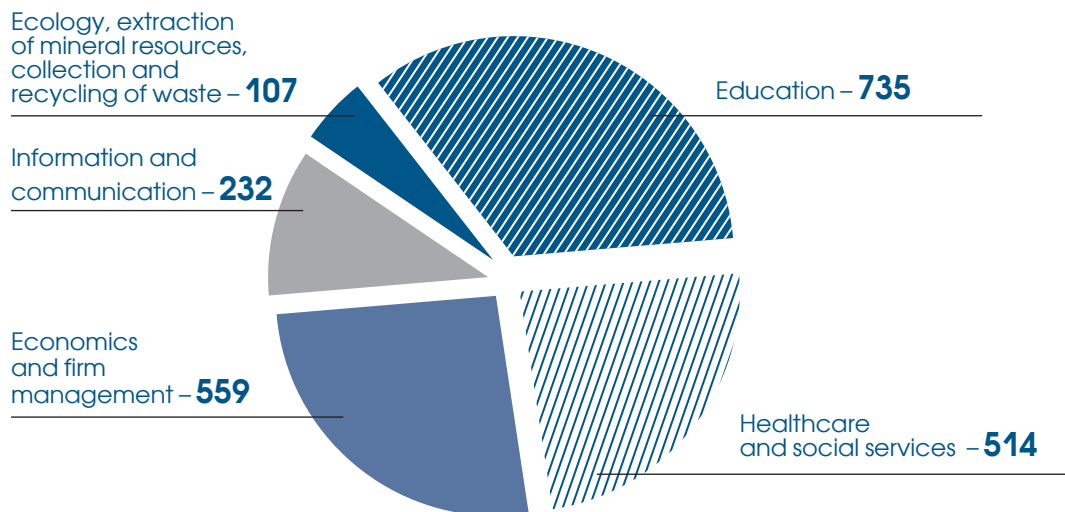
# 4

The distribution of students who completed advanced training and professional retraining courses by types of economic activities was the following:

- Education (24 FEP) – 735 students.
- Healthcare and social services (11 FEP) – 514 students.
- Economics and management (20 FEP) – 559 students.
- Information and communication (8 FEP) – 232 students.
- Ecology, extraction of mineral resources, collection and recycling of waste (9 FEP) – 107 students (fig. 4.25).

Figure 4.25

## DISTRIBUTION OF THE STUDENTS OF FURTHER EDUCATION PROGRAMMES BY TYPES OF ECONOMICAL ACTIVITIES





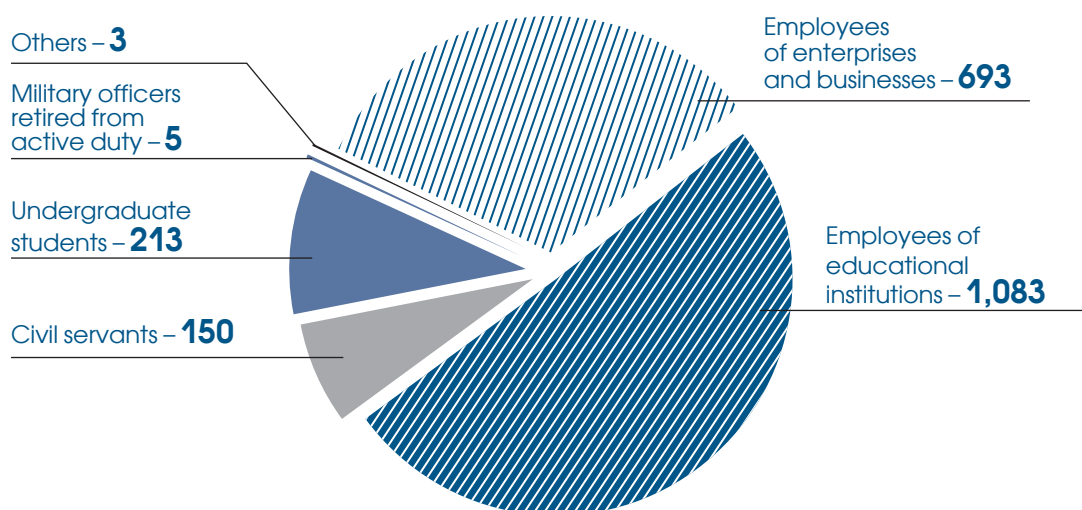


The distribution of students of further professional education by categories was the following:

- Employees of enterprises and businesses – 693
- Employees of educational institutions – 1,083
- Civil servants – 150
- Students enrolled on the main academic programmes of secondary vocational and higher education – 213
- Military officers retired from active duty – 5
- Others – 3 (fig. 4.26).

Figure 4.26

#### DISTRIBUTION OF THE STUDENTS OF FURTHER PROFESSIONAL EDUCATION PROGRAMMES BY CATEGORIES





Further education programmes were funded by the following sources:

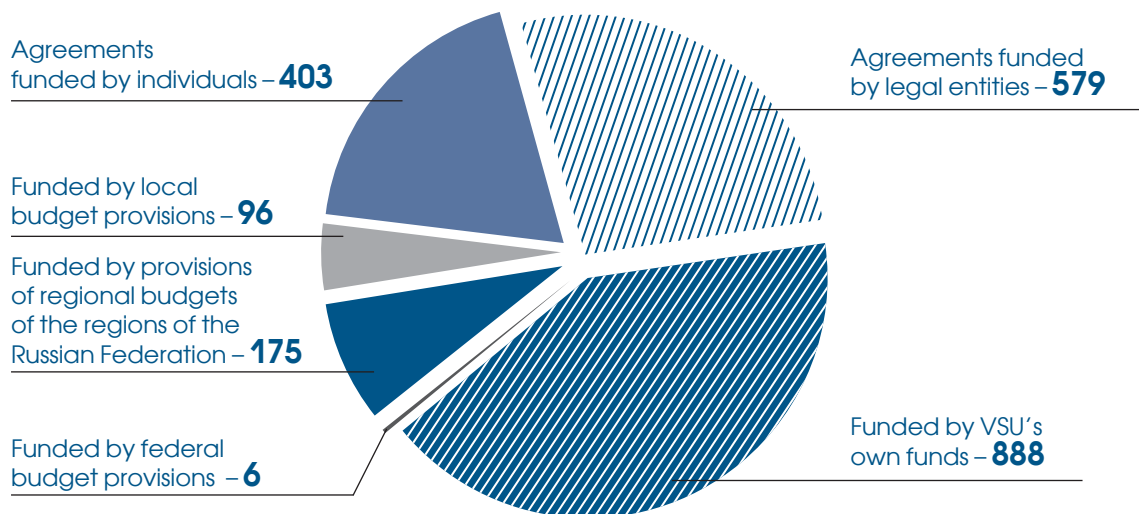
- Federal budget provisions – 6 students
- Provisions of regional budgets of the regions of the Russian Federation – 175 students
- Local budget provisions – 96 students
- Agreements for commercial educational services – 982 students,

among them:

- Agreements funded by individuals – 403 students
- Agreements funded by legal entities – 579 students
- Voronezh State University's own funds – 888 students (fig. 4.27).

Figure 4.27

#### DISTRIBUTION OF THE STUDENTS OF FURTHER PROFESSIONAL EDUCATION PROGRAMMES BY FUNDING SOURCES



In 2019, among the students of further education programmes there were: 34 students with secondary vocational education, 1,900 students with higher education, 209 students completing higher educational programmes, and 4 students completing secondary vocational education (fig. 4.28).

309 people under 25 years old, 250 people aged 25-29, 496 people aged 30-39, 511 people aged 40-49, 49 people aged 50-59, and 269 people aged 60 or over completed further professional education programmes implemented at the University (Figure 4.29).

Figure 4.28

## DISTRIBUTION OF THE STUDENTS OF FURTHER EDUCATION PROGRAMMES BY THE LEVEL OF EDUCATION

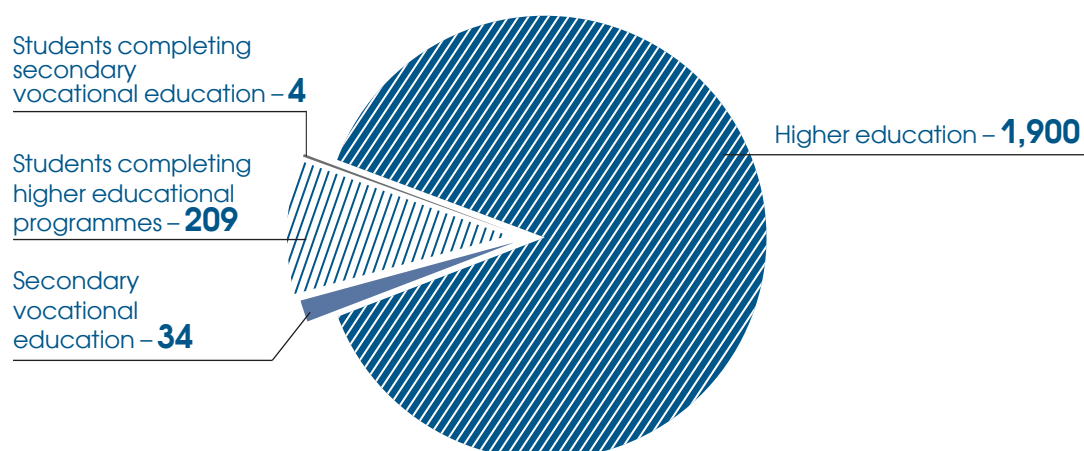
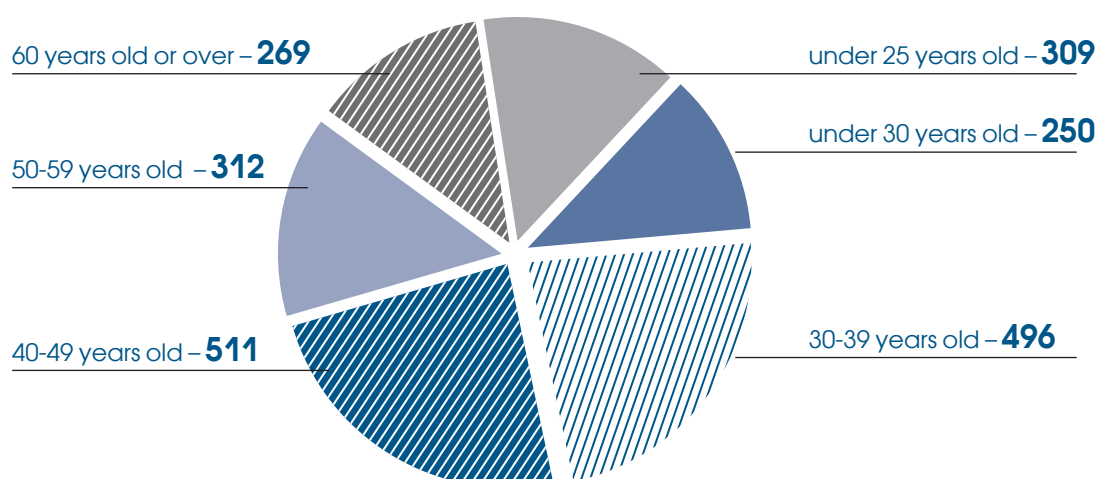


Figure 4.29

## DISTRIBUTION OF THE STUDENTS BY AGE



In addition to the main academic programmes, the university's faculties are successfully implementing various professional retraining programmes with certification. Over the course of 2019, the Faculty of Physics awarded 16 diplomas to the graduates of the programme "Teacher of Physics", 19 diplomas to the graduates of the programme "Teacher of Physics and Astronomy", and 7 diplomas to the graduates of the programme "Optical Eyecare"; the Faculty of Geography, Geoecology, and Tourism awarded 37 diplomas to the graduates of the programme "Teacher of Geography"; the Faculty of Chemistry awarded 23 diplomas to the graduates of the programme "Teacher of Chemistry"; the Faculty of Romance and Germanic Philology awarded 19 diplomas to the graduates of the programme "Teacher of Philology" and 15 diplomas to the graduates of the programme "Translation for Professional Communication"; the Faculty of Applied Mathematics, Informatics, and Mechanics awarded 10 diplomas to the graduates of the programme "Web Design and Computer Graphics", and the Faculty of Mathematics awarded 11 diplomas to the graduates of the programme "System Engineer".



In cooperation with the Atos corporation, Voronezh State University permanently implements and opens new professional retraining programmes, including the following: "Expert in financial statements and controlling" (1 graduate), "Consultant on the management systems and enterprise resource planning" (14 graduates), "IT engineer" (2 graduates), "Support of business processes and project management" (8 graduates).

Educational centres efficiently organise the implementation of further education programmes within research areas. In 2019, the following students completed their advanced training courses: 40 heads of public institutions and organisations and 31 lecturers of the Faculty of Economics at Professor L. T. Gilyarovskaya Resource Centre; 82 students, mainly including state civil and local government servants, at the Legal Innovations and Conciliation Procedures Centre; 52 students at the Communication Studies Centre; 12 employees of Voronezh enterprises at the Radiation Safety Centre, and 25 state civil and local government servants at the Education Practical Centre "Finances, Taxes, Natural Resources".

In 2019, the Centre for Further Professional Education implemented the following professional retraining programmes: Accounting, analysis and audit; Corporate management; Financial management; Human resource and staff records management. 94 students received their diplomas.


Senior medical staff from the medical institutions of Voronezh and the Voronezh region completed the advanced training programme "Management Basics" at the Managers' Training Centre. In 2019, 80 heads of various institutions and organisations of Voronezh completed the professional retraining programme "The State Plan for the Training of Management Personnel for the Organisations of the National Economy of the Russian Federation (Presidential Program)".

In 2019, 29 students obtained their BBA bachelor's diplomas and 19 students obtained their MBA master's diplomas at the VSU Business School. Last year, 15 students completed VSU's double degree programme "Executive MBA" (General Management) in cooperation with the Higher Institute of Commerce (Paris, France) and obtained their MBA diplomas (General Management).

40 VSU staff members completed the advanced training programme "Accounting management in state-funded institutions" at the VSU Business School. 10 employees of various institutions and organisations of Voronezh completed the programme "Financial analysis for enterprise activity diagnostics". 23 employees of educational organisations of Voronezh completed the advanced training programme "Human resource management". 7 employees of Voronezh universities completed the advanced training programme "Project management".

VSU continues to conduct professional training of experts with a university degree in Pharmacy. In 2019, 259 students completed further professional programmes at the Faculty of Pharmaceutics, including 166 pharmacists within the certification cycle programme and 93 students who completed the advanced training programme "Organisation of the process of work with narcotic and psychotropic substances, their precursors, as well as superpotent and poisonous substances".

The International Projects and Programmes Office organised an offsite advanced training programme "International Scientific and Educational Projects. Education Quality Management" for 25 employees of the North-Caucasus Federal University (Stavropol).

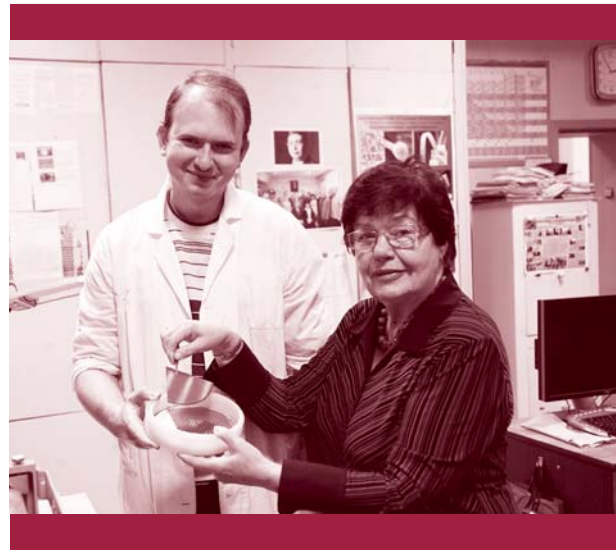


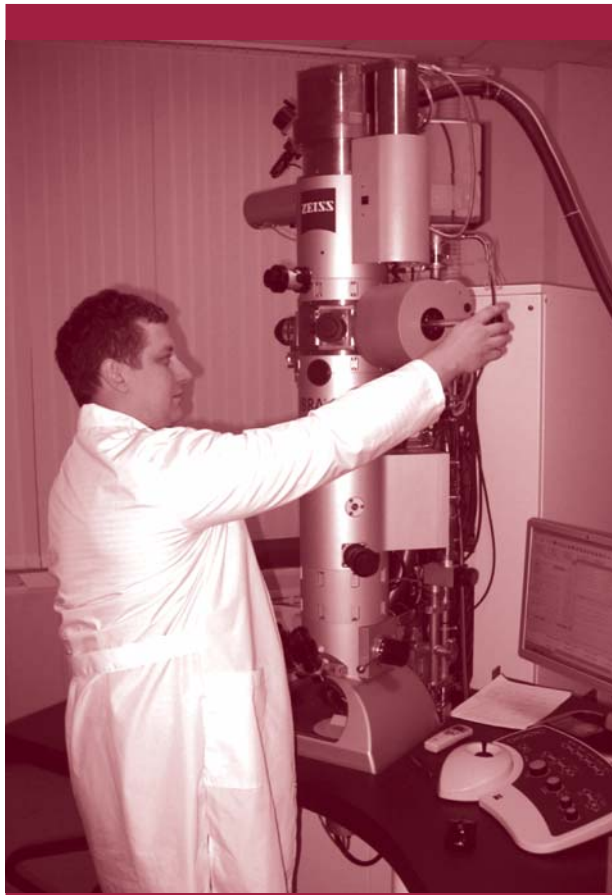
In 2019, employees of the Voronezh State University continued completing the advanced training programmes required for accreditation. 329 lecturers completed the training at these programmes.

In 2019, VSU continued the training of experts for regional examination commissions controlling the state examination of general secondary education programmes in the following subjects: Informatics and ICT (52 experts), Spanish (4 experts).

## MAIN ACHIEVEMENTS OF THE UNIVERSITY IN THE FIELD OF EDUCATIONAL ACTIVITY

1. The University achieved its target figures in student admissions in all higher education programmes and secondary vocational education programmes. 5,437 first-year students were enrolled at VSU, including 2,332 for state-funded places and 3,105 on a fee-paying basis. 32 employer-sponsored students were enrolled at eight faculties.
2. The total number of VSU students in the reporting year was 18,109 people distributed by the level of education in the following way: 10,890 bachelor's degree students, 3,668 master's degree students, 2,377 diploma degree students, 581 PhD students and residents, 740 secondary vocational education students.
3. The total number of international students was 590 people from 69 countries.
4. Specialist's (Nuclear power stations: design, maintenance, engineering) and master's (Sociology) programmes were licensed. Specialist's (Judicial and prosecutorial activities) and master's (Nuclear physics and nuclear technologies) programmes were accredited.
5. VSU continued to implement joint network educational programmes with international universities.
6. 4,115 students graduated from the bachelor's programmes (58 %), master's programmes (31 %), specialist's programmes (5 %), postgraduate and residence programmes (3 %), and secondary vocational education programmes (3 %).
7. 15 massive open online courses were arranged.
8. A separate structural division was created for SVE programmes. Organisational and methodological support was provided for the division.





**RESEARCH,  
INNOVATIONS, AND  
INFORMATISATION**

55



## RESEARCH, INNOVATIONS, AND INFORMATISATION



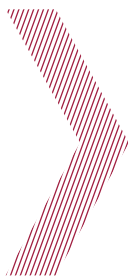
**O.A. Kozaderov,**  
Vice Rector for Research  
and Innovations

### 5.1. MAIN OBJECTIVES OF VSU IN THE AREA OF RESEARCH, INNOVATIONS, AND INFORMATISATION FOR 2019

In 2019, the main objectives of VSU in the area of research, innovations, and informatisation were the following.

- 1.** To encourage VSU researchers to actively participate in various scientific contests and competitions organized by Russian research foundations, international and national projects, and federal target programmes.
- 2.** To encourage the further popularisation of highly ranked manuscripts and innovative projects by VSU researchers.
- 3.** To develop proposals for effective fulfilment of VSU's research, technological, and innovative potential, based on systematic collaboration with industrial enterprises of the Voronezh Region.
- 4.** To organise work aimed at getting VSU journals which are indexed by the Russian Science Citation Index included in Scopus.
- 5.** To monitor if the publication activity of the members of VSU's dissertation boards complies with the requirements of the State Commission for Academic Degrees and Titles.
- 6.** To develop proposals for increasing the effectiveness of incentives for academic staff with good publications records.
- 7.** To develop a plan for increasing the effectiveness of technology commercialisation, including its commercialisation by VSU-based small innovative businesses.
- 8.** To arrange for the introduction of electronic timetables by at least 9 faculties of VSU as part of the development of the university's electronic educational environment.
- 9.** To continue the modernisation of VSU's website in different languages.



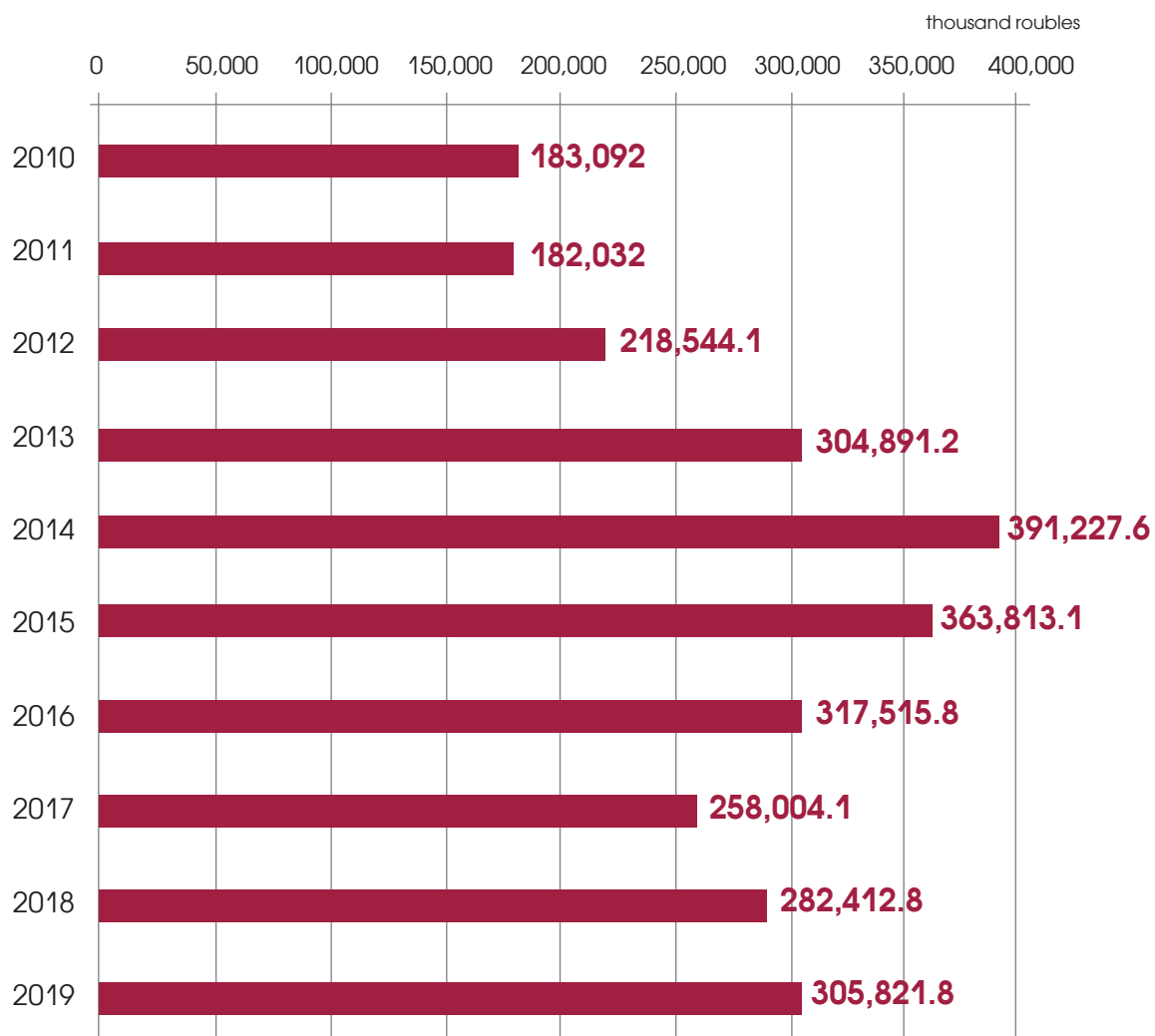


## 5.2. RESEARCH FUNDING IN 2010-2019

In 2019, total funding for research projects amounted to 305.8 million roubles, which is 23.4 million roubles more than the previous year (Fig. 5.1).

Figure 5.1

### RESEARCH FUNDING IN 2010-2019





### 5.3. VSU RESEARCH FUNDING IN 2019 BY SOURCE

Of the total sum invested in research: 46.3 million roubles (15.1%) was received for funding projects under the Government Order by the Ministry of Education and Science of the Russian Federation for higher education institutions in the area of scientific research; 23.3 million roubles (7.6%) for research and development in top-priority areas of science and technology in Russia for 2014-2020 Federal Target Programme; 31.2 million roubles (10.2%) from the grants of the Government of the Russian Federation for the state support of research conducted by the leading scientists in Russian educational institutes of higher education; and 124.2 million roubles (40.6%) constituted grants from the Russian foundations supporting scientific and technical research.

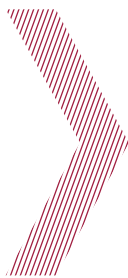
In 2019, state funding constituted 77.2% of the total funding. 21.9% came from industrial enterprises and other organisations that were interested in innovations and planned to implement within their production process the results of the research conducted at VSU.

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

Table 5.1

#### SOURCES OF VSU'S RESEARCH FUNDS IN 2019

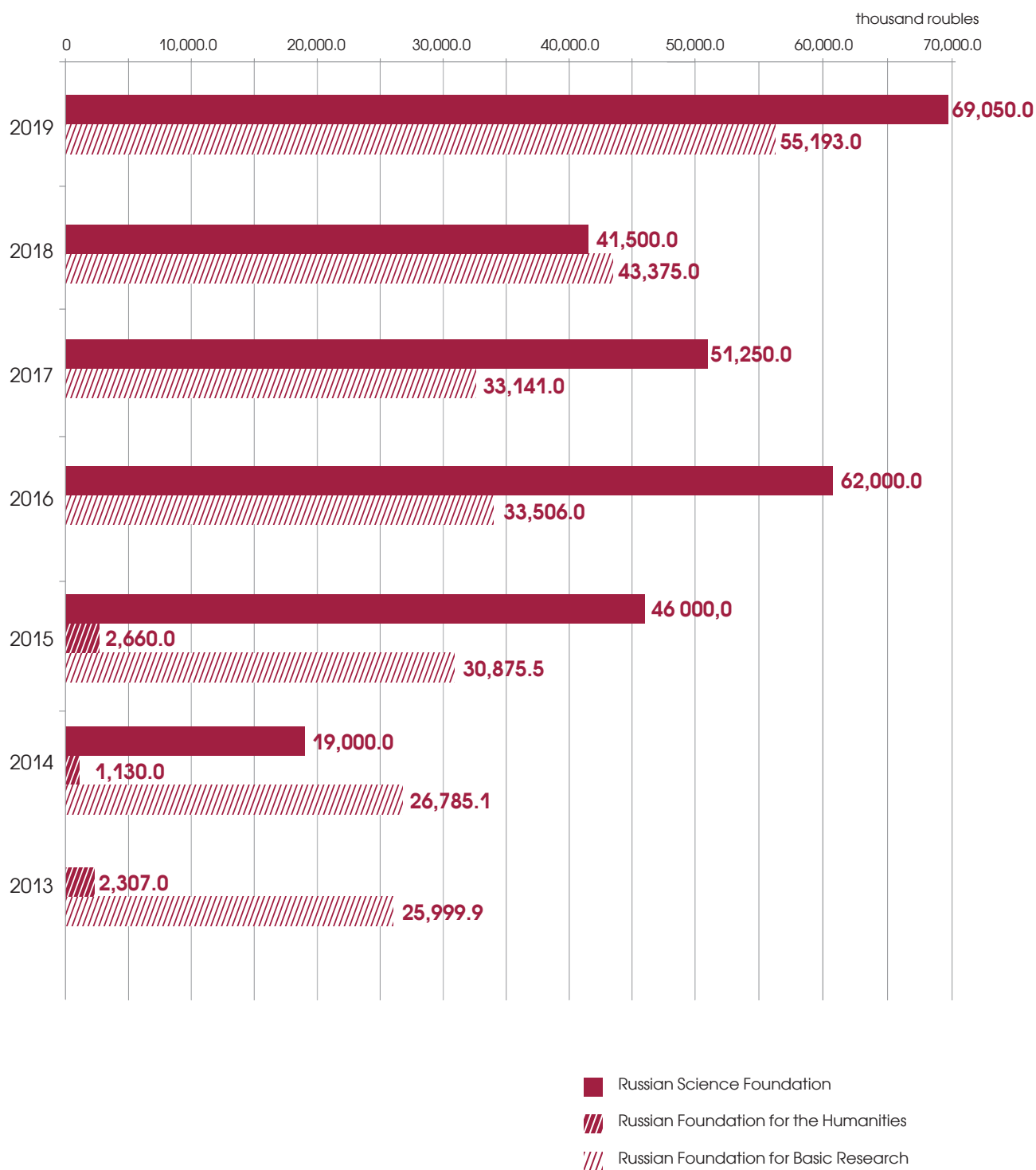
Source of funding	Percentage
Ministry of Science and Higher Education of the Russian Federation	36.0
Russian foundations supporting scientific and technical research and innovations	40.6
Federation subjects and local budget	0.6
Russian economic entities	21.9
Other Russian non-budgetary sources and VSU funds	0.4
International sources	0.5



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 THE VSU'S ACADEMIC STAFF IN 2019

Table 5.2

### PAPERS PUBLISHED BY THE VSU'S ACADEMIC STAFF AS OF 21 FEBRUARY 2020

No.	Indicator	2018	2019
1	Published articles (database "Academic staff articles")	4,769	4,937
2	Published articles (Russian Science Citation Index database)	4,966	4,532
3	Total number of citations (Russian Science Citation Index database)	16,083	19,647
4	Total H-index (Russian Science Citation Index database)	119 24th place	126 24th place
5	Articles published in journals indexed by Web of Science	301	300
6	Total number of citations per year (Web of Science)	2,227	2,462
7	Articles published in journals indexed by Scopus	397	434
8	Total number of citations per year (Scopus)	1,748	2,047

Some more data from the Academic staff articles database:

- Number of monographs: 2018 (113), 2019 (73)
- Number of text books: 2018 (415), 2019 (428).

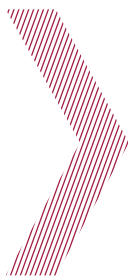


Table 5.3

FACULTIES LISTED ACCORDING TO THE HIRSH INDEX  
(RUSSIAN SCIENCE CITATION INDEX DATA) AS OF 14 FEBRUARY 2020

No.	Name	Hirsch index	
		2018	2019
1	Faculty of Law	70	72
2	Faculty of Philology	60	61
3	Faculty of Economics	51	53
4	Faculty of Medicine and Biology	45	45
5	Faculty of Physics	42	42
6	Faculty of Romance and Germanic Philology	40	41
7	Faculty of Mathematics	36	38
8	Faculty of Geology	36	38
9	Faculty of Chemistry	34	35
10	Faculty of History	33	34
11	Faculty of Geography, Geoecology, and Tourism	29	32
12	Faculty of Applied Mathematics, Informatics, and Mechanics	30	31
13	Faculty of Philosophy and Psychology	26	27
14	Faculty of Journalism	25	26
15	Faculty of Computer Sciences	23	23
16	Faculty of Pharmaceutics	20	22
17	International Education Institute	18	18
18	Faculty of International Relations	16	17
19	Military Training Centre	3	3

The data presented in Table 5.3 was taken from the eLibrary's section on the publications records of the VSU departments (elibrary.ru).



Table 5.4

AUTHORS LISTED ACCORDING TO THE HIRSCH INDEX  
(RUSSIAN SCIENCE CITATION INDEX DATA)

No.	Name	Hirsch index
1	Iosif A. Sternin	56
2	Dmitry A. Endovitsky	37
3	Yury N. Starilov	37
4	Yury I. Treschevsky	31
5	Arkady D. Savko	30
6	Marina V. Sentsova	27
7	Nikolay L. Manakov	26
8	Evelina P. Domashevskaya	25
9	Vladimir B. Mikhno	24
10	Oleg P. Negrobov	23
11	Viktor N. Glaznev	22
12	Alexey A. Kretov	22
13	Vasily N. Popov	22
14	Mikhail V. Frolov	22
15	Anatoly G. Baskakov	21
16	Pavel N. Biryukov	21
17	Lyudmila I. Grishaeva	21
18	Igor E. Risin	21
19	Vladimir F. Selemenev	21
20	Valeriy G. Artyukhov	20
21	Vera I. Vasilieva	20
22	Stanislav G. Kadmensky	20
23	Larisa S. Korobeinikova	20
24	Pavel V. Seredin	20
25	Lyubov V. Tsurikova	20
26	Vladimir A. Shaposhnik	20

Figure 5.3

NUMBER OF PAPERS BY VSU STAFF ACCORDING TO WEB OF SCIENCE CORE COLLECTION AS OF 22 FEBRUARY 2020

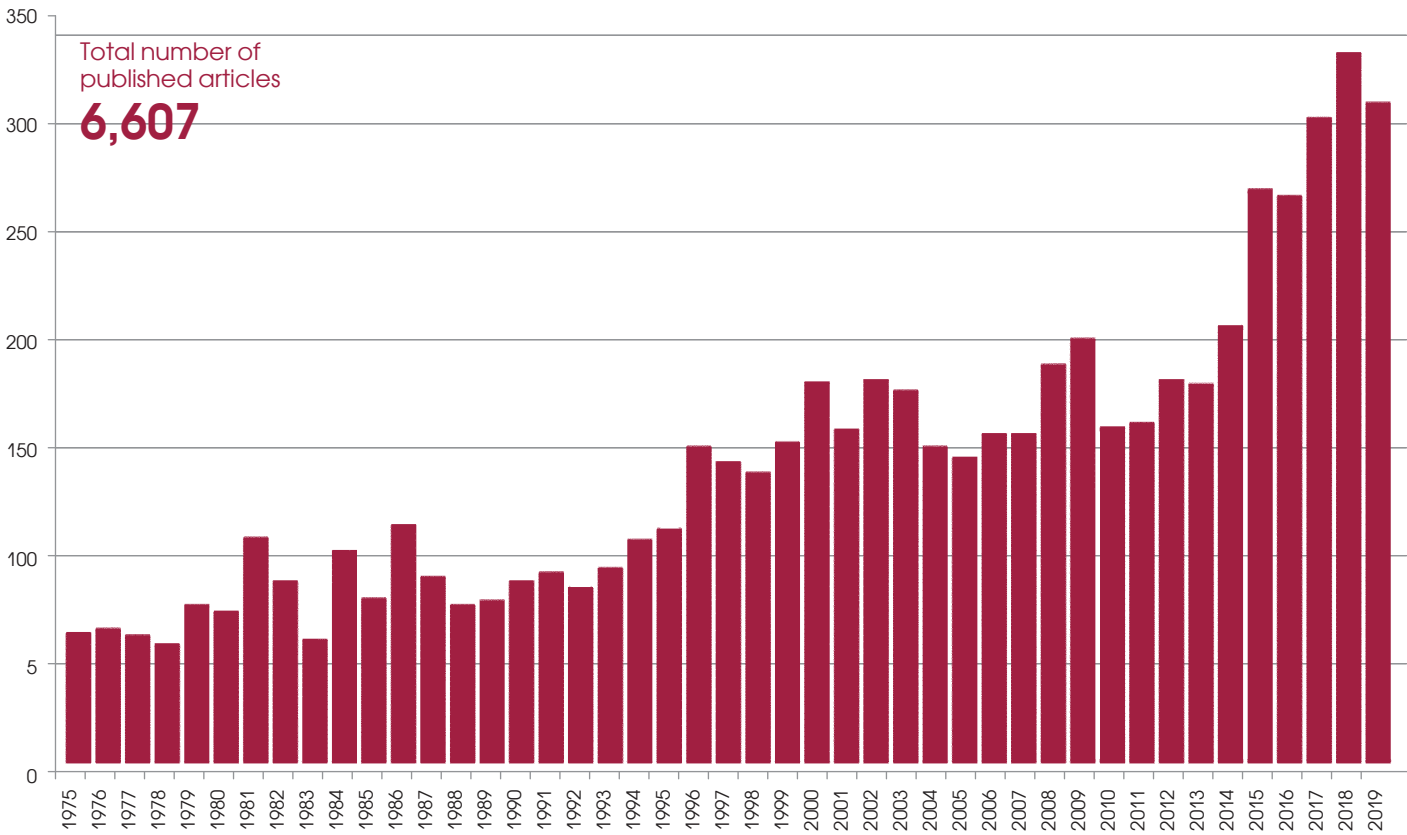
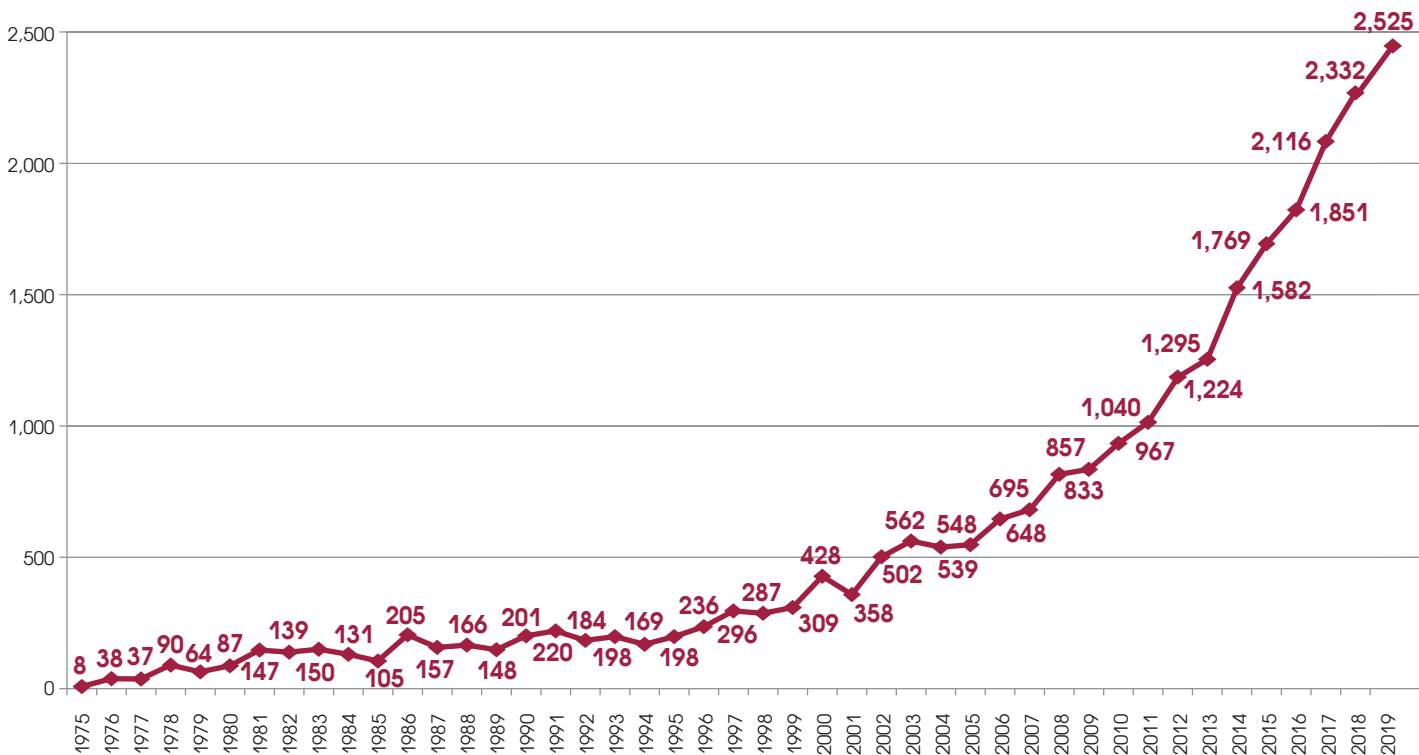


Figure 5.4

CITATION DATA ACCORDING TO WEB OF SCIENCE CORE COLLECTION AS OF 22 FEBRUARY 2020



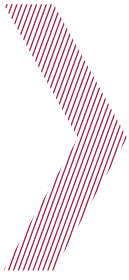


## **5.5. VSU ACADEMIC AND SCIENTIFIC SCHOOLS AND RESEARCH AREAS**

### **RESEARCH IS CARRIED OUT WITHIN 28 MAJOR THEMATIC PRIORITIES IN THE FIELDS OF:**

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, colloids and nanoparticles, 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. The 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 practices.
18. Economics management system: emergence and development.
19. Individuals as subjects of social change: social, humanitarian, and psychological concerns.
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

A leading scientific school

### **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)**

Founded by Professor L.P. Rapoport, DSc in Physics and Mathematics, Honoured Scientist of the Russian Federation

Head Researcher in the subdivision “Formation of multiply charged ions in a strong laser field. Linear and nonlinear susceptibilities of atoms and diatomic molecules” – Professor B.A. Zon, DSc in Physics and Mathematics, Honoured Scientist of the Russian Federation

Head Researcher in the subdivision “Interactions of intense short and ultra-short laser fields with atomic and molecular systems” – Professor N.L. Manakov, DSc in Physics and Mathematics

A leading scientific school

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

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

### **8. Statistical informatics and radiophysics**

Founded by Professor A.P. Trifonov, DSc in Technical Sciences, Honoured Scientist of the Russian Federation

Head Researcher – Professor Yu.S. Radchenko, DSc in Physics and Mathematics

A leading scientific school

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

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

### **10. Atomic and electron structure of condensed matter and nanostructures**

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

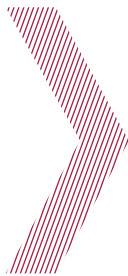
A leading scientific school

### **11. Nuclear and condensed matter physics**

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

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

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



### 13. Chemistry of solids and semiconductors

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

Head Researcher in the subdivision "Physical and chemical principles of the synthesis of solid materials for microelectronics" – Professor G.V. Semenova, DSc in Chemistry

Head Researcher in the subdivision "Study of semiconductors and nanostructured functional films based on them" – Professor I.Ya. Mittova, DSc in Chemistry

A leading scientific school

### 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 of metals and alloys

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

Head Researcher – Professor A.V. Vvedensky, DSc in Chemistry

A leading scientific school

### 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. Classification, fauna, and ecology of invertebrates: 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. Epyntsev, DSc in Biology, Honoured Scientist of the Russian Federation

### 20. Soil genesis, evolution, and ecology in Central Russia

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

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

A leading scientific school

### 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

Founded by Professor N.M. Chernyshov, DSc in Geology, Associate Member of the Russian Academy of Sciences, Honoured Scientist of the Russian Federation

Head Researcher – Professor V.M. Nenakhov, DSc in Geology

A leading scientific school (participated in the 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. East European forest-steppe archaeology**

Founded by Professor A.D. Pryakhin, DSc in History, Honoured Scientist of the Russian Federation

Head Researcher – Professor A.P. Medvedev, DSc in History

A leading scientific school

### **27. Economics theory and the global 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. Eytngon, PhD in Economics, Honoured Economist of the Russian Federation

Head Researcher – Professor Yu.I. Treschevsky, DSc in Economics

A leading scientific school

### **30. Philosophy Philosophy of science**

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

A leading scientific school

### **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**

Founded by 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. Global and Russian linguistics**

Founded by Professor Z.D. Popova, DSc in Philology, Honoured Scientist of the Russian Federation

Head Researcher – Professor I.A. Sternin, DSc in Philology, Honoured Scientist of the Russian Federation

A leading scientific school

### **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. Ilevlev, DSc in Physics and Mathematics, Full Member of the Russian Academy of Sciences

A leading scientific school (participated in the state support programme for the leading scientific schools in Russia)

## 5.6. VSU DISSERTATION COMMITTEES' PERFORMANCE

In 2019, 14 dissertation boards in 30 fields of study were operating at VSU. There were also 5 joint dissertation boards operating in 9 fields of study (Table 5.5).

Table 5.5

### DISSERTATION BOARDS AS OF 1 JANUARY 2020

Code of the dissertation board, fields of study	Chairperson, Academic Secretary, contacts
<b>D 212.038.01</b> 09.00.01 Ontology and Epistemology 09.00.11 Social Philosophy	<b>Alexander S. Kravets</b> , Chairperson <b>Irina Yu. Tikhonova</b> , Academic Secretary Phone: +7 (473) 255-08-57 E-mail: dekanat@phypsy.vsu.ru
<b>D 212.038.03</b> 03.01.04 Biochemistry 03.01.02 Biophysics	<b>Valery G. Artyukhov</b> , Chairperson <b>Margarita Yu. Grabovich</b> , Academic Secretary Phone: +7 (473) 220-89-81 E-mail: artyukhov@bio.vsu.ru
<b>D 212.038.06</b> 01.04.02 Theoretical Physics 01.04.05 Optics 01.04.07 Condensed Matter Physics	<b>Oleg V. Ovchinnikov</b> , Chairperson <b>Dmitry L. Goloschapov</b> , Academic Secretary Phone: +7 920-459-40-93 E-mail: goloshchapov@phys.vsu.ru
<b>D 212.038.07</b> 10.02.01 Russian Language 10.02.19 Linguistic Theory	<b>Alexey A. Kretov</b> , Chairperson <b>Inna A. Merkulova</b> , Academic Secretary Phone: +7 (473) 276-92-61 E-mail: a_a_kretov@rambler.ru
<b>D 212.038.08</b> 02.00.01 Inorganic Chemistry 02.00.04 Physical Chemistry 02.00.05 Electrochemistry	<b>Alexander V. Vvedensky</b> , Chairperson <b>Boris V. Sladkopevtsev</b> , Academic Secretary Phone: +7 (473) 220-85-46 E-mail: dp-kmins@yandex.ru
<b>D 212.038.10</b> 01.04.2003 Radiophysics 01.04.10 Semiconductor Physics 05.13.01 System Analysis, Management and Information Processing (Radioengineering, Automatics, Communications)	<b>Vladimir A. Terekhov</b> , Chairperson <b>Vladislav A. Stepkin</b> , Academic Secretary Phone: +7 (473) 220-83-63 E-mail: stepkin@phys.vsu.ru
<b>D 212.038.12</b> 07.00.02 Russian History 07.00.06 Archaeology	<b>Mikhail D. Karpachev</b> , Chairperson <b>Elena Yu. Zakharova</b> , Academic Secretary Phone: +7 (473) 224-75-15 E-mail: m-karpach@mail.ru, ez@list.vsu.ru
<b>D 212.038.14</b> 10.01.01 Russian literature 10.01.03 International Literature (literature of the countries of Germanic and Romance language families)	<b>Viktor M. Akatkin</b> , Chairperson <b>Alexander A. Zhitenev</b> , Academic Secretary Phone: +7 (473) 255-99-49, 220-89-41 E-mail: msv2012kafedra@yandex.ru, pravdukhina@phil.vsu.ru
<b>D 212.038.15</b> 08.00.01 Economics Theory 08.00.05 Economics and National Economy Management (by field and sphere of activity, including Labour Economics and Regional Economics)	<b>Tatiana N. Gogoleva</b> , Chairperson <b>Galina V. Golikova</b> , Academic Secretary Phone: +7 (473) 228-11-60 (IP 5130) E-mail: tgogoleva2003@mail.ru
<b>D 212.038.16</b> 10.02.05 Romance Languages 10.02.04 Germanic Languages	<b>Natalia A. Fenenko</b> , Chairperson <b>Oxana M. Voevudskaya</b> , Academic Secretary Phone: +7 (473) 253-22-38 E-mail: fenenko@rgph.vsu.ru
<b>D 212.038.18</b> 10.01.10 Journalism	<b>Vladimir V. Tulupov</b> , Chairperson <b>Alexander A. Kazhikin</b> , Academic Secretary Phone: +7 (473) 274-52-71 E-mail: vlvtul@mail.ru

Code of the dissertation board, fields of study	Chairperson, Academic Secretary, contacts
<b>D 212.038.19</b> 02.00.02 Analytical Chemistry 02.00.03 Organic Chemistry 02.00.21 Solid State Chemistry	<b>Viktor N. Semenov</b> , Chairperson <b>Nadezhda V. Stolpovskaya</b> , Academic Secretary Phone: +7 (473) 220-89-73 E-mail: kcmf@main.vsu.ru
<b>D 212.038.20</b> 05.13.17 Theory of Informatics 05.13.18 Mathematical Modelling, Numerical Methods, and Program Systems	<b>Alexander D. Bayev</b> , Chairperson <b>Sergey A. Shabrov</b> , Academic Secretary Phone: +7 (473) 220-86-18 E-mail: pokorny@kma.vsu.ru
<b>D 212.038.23</b> 08.00.12 Accounting, Statistics	<b>Dmitry A. Endovitsky</b> , Chairperson <b>Tatiana A. Pozhidayeva</b> , Academic Secretary Phone: +7 (473) 275-57-27 E-mail: endov@econ.vsu.ru
<b>D 999.010.03</b> 13.00.01 General Pedagogics, History of Pedagogics and Education 13.00.08 Theory and methods of vocational education FSFEI HE "Voronezh State University" FSFEI HE "Lipetsk State Pedagogical University" FSFEI HE Russian Air Force Military Educational and Scientific Centre "Air Force Academy named after Professor N.E. Zhukovsky and Y.A. Gagarin" (Voronezh)	<b>Irina F. Berezhnaya</b> , Chairperson <b>Elena V. Krivotulova</b> , Academic Secretary Phone: +7 (473) 255-72-01 E-mail: beregn55@mail.ru
<b>D 999.109.03</b> 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"	<b>Semen L. Podvalny</b> , Chairperson <b>Tatiana M. Ledeneva</b> , Vice Chairperson <b>Anatoly K. Pogodaev</b> , Vice Chairperson <b>Svetlana Yu. Beletskaya</b> , Academic Secretary Phone: +7 (473) 243-77-18
<b>D 999.159.03</b> 08.00.05 Economics and National Economy Management (by field and sphere of activity, including Management, Economics, Organisation and Management of Enterprises, Industries, and Complexes: industry) FSFEI HE "Southwest State University" FSFEI HE "Orel State University of Economics and Trade" FSFEI HPE "Voronezh State University"	<b>Yulia V. Vertakova</b> , Chairperson <b>Inna G. Parshutina</b> , Vice Chairperson <b>Vladimir I. Gurov</b> , Vice Chairperson <b>Yulia S. Polozhentseva</b> , Academic Secretary Phone: +7 (4712) 22-26-46
<b>D 999.191.02</b> 01.02.04 Solid Mechanics (Physics and Mathematics, and Technical Sciences) FSFEI HPE "Tula State University" FSFEI HPE "Voronezh State University"	<b>Alexey A. Markin</b> , Chairperson <b>Alexander I. Shashkin</b> , Vice Chairperson <b>Vadim V. Glagolev</b> , Academic Secretary Phone: +7 (4872) 73-44-44
<b>D 999.104.03</b> (closed 15 July, 2019) 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 FSAEI HE "Belgorod State University" FSFEI HE "Voronezh State University" FSFEI HE "Orel State University"	<b>Evgeny E. Tonkov</b> , Chairperson <b>Yury N. Starilov</b> , Vice Chairperson <b>Alexey N. Niphanov</b> , Academic Secretary Phone: +7 (4722) 30-11-93 E-mail: D999.104.03@bsu.edu.ru

In 2019, 90 dissertations were defended at Voronezh State University dissertation boards, including 6 doctoral dissertations and 84 PhD dissertations. 9 dissertations were defended by postgraduate students graduating in 2019, 9 dissertations were defended by university staff members, including 2 DSc and 7 PhD dissertations (Table 5.6). 5 DSc and 2 PhD dissertations were defended at dissertation boards belonging to other universities.

Table 5.6

### NUMBER OF PEOPLE WHO OBTAINED THEIR PHD AND DSC DEGREES IN 2019, BY THE FIELD OF STUDY

Code of the dissertation board	Code of the field of study of the board	The number of dissertations considered in 2019						
		PhD				DSc		
		Total	VSU employees	VSU postgraduate students (graduated in 2019)	External applicants	Total	VSU employees	External applicants
D 212.038.01	09.00.01 Ontology and Epistemology	–	–	–	–	–	–	–
	09.00.11 Social Philosophy	–	–	–	–	–	–	–
D 212.038.03	03.01.02 Biophysics	–	–	–	–	–	–	–
	03.01.04 Biochemistry	1	–	–	1	–	–	–
D 212.038.06	01.04.02 Theoretical Physics	1	–	1	–	–	–	–
	01.04.05 Optics	1	–	–	1	–	–	–
	01.04.07 Condensed Matter Physics	2	–	1	1	–	–	–
D 212.038.07	10.02.01 Russian Language	2	–	–	2	–	–	–
	10.02.19 Linguistic Theory	–	–	–	–	–	–	–
D 212.038.08	02.00.01 Inorganic Chemistry	–	–	–	–	–	–	–
	02.00.04 Physical Chemistry	–	–	–	–	–	–	–
	02.00.05 Electrochemistry	1	1	–	–	–	–	–
D 212.038.10	01.04.03 Radiophysics	2	–	1	1	–	–	–
	01.04.10 Semiconductor Physics	1	–	1	–	–	–	–
	05.13.01 System Analysis, Management, and Information Processing	1	1	–	–	1	1	–
D 212.038.12	07.00.02 Russian History	4	1	–	3	2	–	2
	07.00.06 Archaeology	4	–	–	4	–	–	–
D 212.038.14	10.01.01 Russian Literature	2	–	–	2	–	–	–
	10.01.03 International Literature (literature of the countries of Germanic and Romance language families)	–	–	–	–	–	–	–
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 and Regional Economics)	5	1	–	4	2	1	1
D 212.038.16	10.02.04 Germanic Languages	1	–	–	1	1	–	1
	10.04.05 Romance Languages	2	–	–	2	–	–	–
D 212.038.18	10.01.10 Journalism	10	–	2	8	–	–	–
D 212.038.19	02.00.02 Analytical Chemistry	5	–	2	3	–	–	–
	02.00.03 Organic Chemistry	2	–	1	1	–	–	–
	02.00.21 Solid State Chemistry	2	–	–	2	–	–	–



End of table 5.6

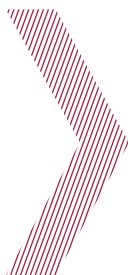
Code of the dissertation board	Code of the field of study of the board	The number of dissertations considered in 2019						
		PhD				DSc		
		Total	VSU employees	VSU postgraduate students (graduated in 2019)	External applicants	Total	VSU employees	External applicants
D 212.038.20	05.13.17 Theory of Informatics	–	–	–	–	–	–	–
	05.13.18 Mathematical Modelling, Numerical Methods, and Program Systems	4	–	–	4	–	–	–
D 212.038.23	08.00.12 Accounting, Statistics	11	3	–	8	–	–	–
D 999.010.03	13.00.01 General Pedagogics, History of Pedagogics and Education	10	–	–	10	–	–	–
	13.00.08 Theory and methods of vocational education	10	–	–	10	–	–	–
	Totals	84	7	9	68	6	2	4

The training of DSc students was conducted in accordance with the specialisations of the dissertation boards.

Members of the dissertation boards are required to publish their articles regularly in journals, primarily those included in Web of Science and Scopus, as well as specialised professional databases Astrophysics, PubMed, Mathematics, Chemical Abstracts, Springer, Agris, GeoRef, MathSciNet, BioOne, and journals included in the list of Russian peer-reviewed journals recommended by the State Commission for Academic Degrees and Titles.

The university examined the originality of the text to isolate cases of copying material without reference to the author and (or) the source of the citation.





## 5.7. LIST OF RESEARCH PROJECTS AND GRANTS

### SCIENTIFIC RESEARCH AS A CORE PART OF THE GOVERNMENT ORDER OF THE MINISTRY OF SCIENCE AND HIGHER EDUCATION OF THE RUSSIAN FEDERATION (11 PROJECTS)

3.7514.2017/BCh FZGU-2017-0006 Research project No. 17015 2017-2019

Generation of the high harmonics ionization of atomic systems in intense laser fields

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

6.6927.2017/BCh FZGU-2017-0004 Research project No. 17012 2017-2019

Epigenetic regulation of the Krebs cycle enzymes as part of adaptive responses of plant cell metabolism's to extreme conditions

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

4.7972.2017/BCh FZGU-2017-0005 Research project No. 17010 2017-2019

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

Head Researcher – Professor V.M. Ievlev, DSc in Chemistry, Full Member of the Russian Academy of Sciences (Faculty of Chemistry, Department of Materials Science and Nanosystem Technologies)

6.4656.2017/BCh FZGU-2017-0001 Research project No. 17011 2017-2019

Studying the metabolism and physiological functions of reactive oxygen in cells

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

4.6937.2017/BCh FZGU-2017-0007 Research project No. 17013 2017-2019

Dynamics and equilibrium of sorption of biologically active substances by nanostructured materials following their chromatographic separation, concentration, and extraction

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

3.6672.2017/BCh FZGU-2017-0008 Research project No. 17014 2017-2019

Studying the nonlinear optical properties and bleaching in associates of organic dyes with plasmonic nanoparticles of various morphology

Head Researcher – senior research fellow R.A. Ganeev, DSc in Physics and Mathematics (Faculty of Physics, Department of Optics and Spectroscopy)

3.4826.2017/BCh FZGU-2017-0010 Research project No. 17018 2017-2019

Spectroscopic characteristics of excited atoms and molecules

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

3.8122.2017/BCh FZGU-2017-0012 Research project No. 17019 2017-2019

Developing and studying ultra-wideband radioelectronic and location systems using ultra-short impulse signals of subnanosecond duration

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



16.8158.2017/BCh FZGU-2017-0003 Research project No. 17019 2017-2019

Synthesising functional nanostructured materials and precision diagnostics for atomic and electronic structure and the interfacial interaction by means of synchrotron radiation of megascience facilities

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

3.6655.2017/BCh FZGU-2017-0009 Research project No. 17016 2017-2019

Studying the processes of electronic excitation energy transfer in organo-inorganic associates of semiconductor colloid quantum dots and dye molecules

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

11.4718.2017/BCh FZGU-2017-0015 Research project No. 17009 2017-2019

Semiconductor nanoheterostructures with higher than normal indices: new approaches to synthesis and basic research

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

**SCIENTIFIC RESEARCH CARRIED OUT WITHIN THE PROJECT ORIENTED PART  
OF THE GOVERNMENT ORDER OF THE MINISTRY OF SCIENCE AND HIGHER EDUCATION  
OF THE RUSSIAN FEDERATION (4 PROJECTS)**

3.1761.2017/PCh FZGU-2017-0011 Research project No. 17003 2017-2019

Controlling linear and nonlinear electromagnetic behaviour of molecules and nanoparticles in strong external fields

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

3.1761.2017/PCh FZGU-2017-0002 Research project No. 17003 2017-2019

Atomic and molecular photoprocesses in strong laser fields, including short and ultra-short impulse signals

Head Researcher – Associate Professor M.V. Frolov, DSc in Physics and Mathematics (Faculty of Physics, Department of Theoretical Physics)

8.3844.2017/PCh FZGU-2017-0013 Research project No. 17006 2017-2019

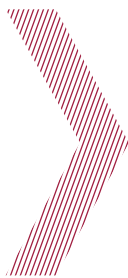
New linear and condensed heterocyclic systems based on functionally substituted hydroquinols: developing methods of synthesis and studying the physiological activity

Head Researcher – Professor A.A. Sirota, DSc in Technical Sciences (Faculty of Computer Sciences, Department of Information Security and Processing Technologies)

4.3633.2017/PCh FZGU-2017-0014 Research project No. 17004 2017-2019

Development of new corrosion inhibitors for copper and its functionally-substituted triazole alloys to be used in heat-exchange equipment

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



**PROJECTS CARRIED OUT WITHIN THE COOPERATION PROGRAMMES BETWEEN THE MINISTRY OF EDUCATION OF THE RUSSIAN FEDERATION AND GERMAN ACADEMIC EXCHANGE SERVICE (DAAD) "MIKHAIL LOMONOSOV" AND "IMMANUEL KANT" (1 PROJECT)**

34.13491.2019/13.2 Research project No. 19052 2019

Works of Friedrich Gorenstein and 19th century Russian characterology

Head Researcher – V.G. Kravchyuk, post-graduate student (Faculty of Philology, Department of History and Typology of Russian and Foreign Literature)

**GRANTS OF THE GOVERNMENT OF THE RUSSIAN FEDERATION FOR THE STATE SUPPORT OF RESEARCH CONDUCTED BY THE LEADING SCIENTISTS IN RUSSIAN UNIVERSITIES AND RESEARCH ORGANISATIONS (MEGA-GRANT)**

14Z50.31.0037 Research project No. 17022 2017–2019

Studying the problems of mathematical hydrodynamics

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

**GRANTS OF THE PRESIDENT OF THE RUSSIAN FEDERATION FOR SUPPORT OF RESEARCH BY YOUNG RUSSIAN SCIENTISTS WITH A DSC DEGREE (2 GRANTS)**

MD-42.2019.2 Research project No. 19029 2019-2020

Highly functional hybrid epitaxial nanoheterostructures based on A3B5 semiconductor compounds, A3N nitrides, and porous silicon

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

MD-6872.2018.9 Research project No. 18055 2018-2019

Developing the methods for locating unmanned aerial vehicles using impulse signals of nano and subnanosecond duration

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

**GRANTS OF THE PRESIDENT OF THE RUSSIAN FEDERATION FOR SUPPORT OF RESEARCH BY YOUNG RUSSIAN SCIENTISTS WITH A PHD DEGREE (2 GRANTS)**

MK-2213.2018.1 Research project No. 18061 2018-2019

Studying alpha models of non-Newtonian hydrodynamics

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

MK-925.2018.3 Research project No. 18015 2018-2019

Studying electrical convection in systems with heterogeneous ion-exchange membranes with different surface morphologies

Head Researcher – senior engineer E.M. Akberova, PhD in Chemistry (Faculty of Chemistry, Department of Analytical Chemistry)

MK-419.2019.2 Research project No. 19025 2019-2020

Developing structurally and morphologically similar biochemical materials comparable to enamel and dental tissue of a human tooth with stable binding and integration in the mineral and organic system tooth/biocomposite

Head Researcher – senior research fellow D.L. Goloschapov (Joint Laboratory Physics of Nanoheterostructures and Semiconductor Materials)



MK-586.2019.2 Research project No. 19026 2019-2020

Photoprocesses in hybrid associates of Ag<sub>2</sub>S colloid quantum dots and the indocyanine green dye used for cancer theranostics

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

MK-933.2019.8 Research project No.19027 2019-2020

Holographic technique for the space-time processing of hydroacoustic signals in shallow-water ocean waveguides

Project Supervisor – senior research technician D.Yu. Prosovetsky (Communication Studies Centre)

MK-3173.2019.11 Research project No. 19028 2019-2020

Studying the protective properties of methylene blue in case of intoxication of pollinating insects by pesticides

Head Researcher – Associate Professor M.Yu. Syromyatnikov, PhD in Biology (Faculty of Medicine and Biology, Department of Genetics, Cytology, and Bioengineering)

#### **GRANTS OF THE PRESIDENT OF THE RUSSIAN FEDERATION TO SUPPORT LEADING SCIENTIFIC SCHOOLS OF THE RUSSIAN FEDERATION (1 PROJECT)**

NSH-3451.2018.11 Research project No. 18003 2018-2019

Genetics and bioenergetics of mitochondria as a foundation for the development of modern agrobiotechnologies

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

#### **FEDERAL TARGET PROGRAMME “RESEARCH AND DEVELOPMENT IN TOP-PRIORITY AREAS OF SCIENCE AND TECHNOLOGY IN RUSSIA FOR 2014–2020” (2 PROJECTS)**

14.586.21.0062 Research project No. 18032 2018-2020

Development of a new method of diagnosing oncological diseases by the harmonisation of sequencing data and protein chips with a reversed phase

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

Research project No. 19054 2018-2020

Development of the technology of pilot production of recombinant ferments for the food manufacturing industry

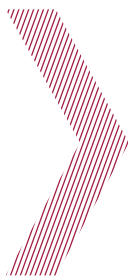
Head Researcher – research fellow A.A. Sychov, PhD in Biology (Faculty of Medicine and Biology, EFKO Department of Molecular Biotechnology)

#### **RUSSIAN SCIENCE FOUNDATION GRANT FOR CONDUCTING BASIC RESEARCH AND SCIENTIFIC SEARCH BY RESEARCH GROUPS (7 PROJECTS)**

19-11-00146 Research project No. 19016 2019-2021

Functional analysis in modern hydrodynamics problems

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



19-11-00197 Research project No. 19013 2019-2021

Linear and nonlinear equations in the spaces of function and their application for problems in physics and technology

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

18-12-00476 Research project No. 18018 2018-2020

Studying the effects of atomic structure excitation and resonance in the fundamental processes in an intense laser field

Head Researcher – Professor M.V. Frolov, DSc in Physics and Mathematics (Faculty of Physics, Department of Theoretical Physics)

19-14-00150 Research project No. 19018 2019-2021

Epigenetic and enzymic mechanisms for the regulation of respiratory metabolism and the formation of reactive oxygen and nitrogen intermediates in adaptive responses of the plant cell to stress factors

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

19-12-00095 Research project No. 19015 2019-2021

Studying multi-quantum processes with the participation of free and bound atoms, ions, and molecules for infrared physical astronomy

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

19-12-00266 Research project No. 19017 2019-2021

Managing photostability and quantum efficiency of IR luminescence of Ag<sub>2</sub>S colloid quantum dots for applications of quantum sensor studies

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

19-18-00205 Research project No. 19020 2019-2021

Poets and poetry in post-historical era

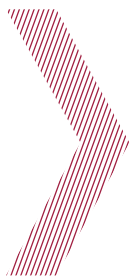
Head Researcher – Associate Professor A.A. Zhytenev, DSc in Philology (Faculty of Philology, Department of Humanities and Arts)

**RUSSIAN SCIENCE FOUNDATION GRANT FOR RESEARCH CONDUCTED VIA THE EXISTING WORLD-CLASS RESEARCH INFRASTRUCTURE WITHIN THE PRESIDENTIAL PROGRAMME FOR RESEARCH PROJECTS CONDUCTED BY LEADING SCIENTISTS, INCLUDING YOUNG SCIENTISTS (1 PROJECT)**

19-72-20180 Research project No. 19014 2019-2022

Compatibility and transformation of functional inorganic nanoparticles with cell cultures in hybrid materials produced in vitro according to the synchrotron studies of the reconstruction of atomic and electronic structures

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



**RUSSIAN SCIENCE FOUNDATION GRANT FOR THE EXTENTION OF THE DURATION OF THE BASIC RESEARCH PROJECTS AND PILOT STUDY IN TOP PRIORITY SPECIAL RESEARCH AREAS (1 PROJECT)**

16-15-00003-P Research project No. 19019 2019-2020

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

**RUSSIAN SCIENCE FOUNDATION GRANTS FOR CONDUCTING RESEARCH WITH PARTICIPATION OF YOUNG SCIENTISTS WITHIN THE PRESIDENTIAL PROGRAMME FOR RESEARCH PROJECTS CONDUCTED BY LEADING SCIENTISTS, INCLUDING YOUNG SCIENTISTS (3 PROJECTS)**

17-72-20105 Research project No. 17073 2017-2020

Developing, obtaining, and studying new ferroelectric and magneto-electric materials with preset functional properties determined by means of controlled alteration of their nanostructure

Head Researcher – senior research fellow N.G. Popravko, PhD in Physics and Mathematics (Faculty of Physics, Department of Experimental Physics)

18-74-10097 Research project No. 18050 2018-2021

Development of blood thinners of new generation based on blood coagulation factor Xa and XIa inhibitors of linear and condensed functionally substituted hydro-quinols

Head Researcher – senior research fellow I.V. Ledeneva, PhD in Chemistry (Faculty of Chemistry, Department of Organic Chemistry)

19-72-10007 Research project No. 19042 2019-2021

Studying the peculiarities of the formation of low-dimensional semiconductor nanostructures on porous silicon

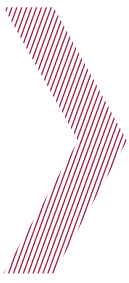
Head Researcher – senior research fellow A.S. Lenshin, PhD in Physics and Mathematics (Joint Laboratory Physics of Nanoheterostructures and Semiconductor Materials)

**RUSSIAN SCIENCE FOUNDATION GRANT FOR CONDUCTING INITIATIVE RESEARCH BY YOUNG SCIENTISTS WITHIN THE PRESEDENTIAL PROGRAMME (1 PROJECT)**

18-76-00027 Research project No. 18049 2018-2020

Developing new approaches to the evaluation of the toxicity of pesticides for insect-pollinators

Head Researcher – Associate Professor M.Yu. Syromyatnikov, PhD in Biology (Faculty of Medicine and Biology, Department of Genetics, Cytology, and Bioengineering)



## THE RUSSIAN FOUNDATION FOR BASIC RESEARCH GRANTS

### INITIATIVE PROJECTS (25 PROJECTS)

19-07-00037 Research project No. 19004 2019-2021

**Algebraic models of fuzzy production systems for managing distributed knowledge**

Head Researcher – Professor S.D. Makhortov, DSc in Physics and Mathematics (Faculty of Computer Sciences, Department of Programming and Information Technology)

19-05-00660 Research project No. 19001 2019-2021

**A model for the optimisation of the social and economic environment of large cities**

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

19-011-00796 Research project No. 19002 2019-2021

**Deliberateness as the main principle for publicly significant decisions – legal aspects**

Head Researcher – Associate Professor V.V. Denisenko, PhD in Law (Faculty of Law, Department of Theory and History of State and Law)

19-010-00474 Research project No. 19005 2019-2021

**Sustainable development of economic entities facing “big challenges”**

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

19-010-00138 Research project No. 19006 2019-2021

**Elaboration of the theory of adaptive targeted forecasting models for strategic planning of social and economic processes**

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

19-01-00732 Research project No. 19007 2019-2021

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

Head Researcher – Professor A.G. Baskakov, DSc in Physics and Mathematics (Faculty of Applied Mathematics, Informatics, and Mechanics, Department of System Analysis and Management)

19-011-00796 Research project No. 19003 2019-2021

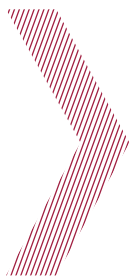
**Neoarchean ultra-acidic magmatism of the Kursk region of Eastern Sarmatia: petrology, age, and paleotectonic correlations**

Head Researcher – Professor K.A. Savko, DSc in Geology (Faculty of Geology, Department of Mineral Resources and Mineral Management Studies)

19-05-00336 Research project No. 19008 2019-2021

**A 3D comprehensive geophysical model of the structure and probable environment of the Koromanty division of the central part of the East European Craton**

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



17-08-00426 Research project No. 17034 2017-2019

Electrochemical polarization of metal-ion exchanger nanocomposites for constant deoxygenation of water in open flow systems

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

17-01-00138 Research project No. 17028 2017-2019

Studying the properties and interactions of functional spaces, basic sequences, and special operators

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

17-05-00569 Research project No. 17035 2017-2019

Studying the functioning of ecological and geochemical background and health risks to people living in residential and industrial areas of 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)

17-04-01039 Research project No. 17033 2017-2019

Intracellular mechanism of transduction of photoreceptor signal regulating the functioning of the key enzymes of the tricarboxylic acid cycle in plants under the changed light pattern

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

17-03-01140 Research project No. 17029 2017-2019

Studying the nature of microplasticity and variability of magnetic properties of multicomponent iron based amorphous alloys

Head Researcher – Professor S.B. Kushev, DSc in Physics and Mathematics (Faculty of Chemistry, Department of Materials Science and Nanosystem Technologies)

17-01-00251 Research project No. 17036 2017-2019

Models of technical systems with hysteresis characteristics under conditions of parametric uncertainty

Head Researcher – Professor M.G. Matveev, DSc in Technical Sciences (Faculty of Computer Sciences, Department of Information Technologies in Management)

17-02-00748 Research project No. 17037 2017-2019

Photophysical processes in rare-earth-ion-doped CdS and ZnS colloid quantum dots conjugated with organic molecules and J-aggregates

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

17-02-00435 Research project No. 17055 2017-2019

Control over the professional adaptation of cadets and young specialists working in units subordinate to the Ministry of Emergency Situations

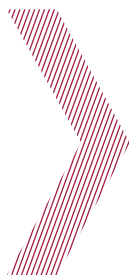
Head Researcher – senior research fellow I.V. Shershen, PhD in Economics (Faculty of Computer Sciences, Department of Digital Technology)

18-08-01260 Research project No. 18006 2018-2020

Demineralisation and separation of the aqueous salt solutions of neutral amino acids and sugar by ion-exchange dialysis

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





18-05-00226 Research project No. 18012 2018-2020

Elaboration of the group method of data handling for the analysis of geological and geophysical data

Head Researcher – Associate Professor O.M. Muravina, DSc in Geology (Faculty of Geology, Department of Geophysics)

18-04-00556 Research project No. 18005 2018-2020

Molecular, biochemical, and evolutionary mechanisms of phenotypic differences of strains of colourless sulphur bacteria *Beggiatoa leptomitiformis* D-401 and D-402 with genome identity above 99.9%

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

18-04-00464 Research project No. 18004 2018-2020

Studying the issues related to taxonomy and biodiversity of problem systematic groups of Hemiptera (Heteroptera) in the Central and Eastern Palearctic: morphological, karyological, and molecular cytogenetic approaches

Head Researcher – Professor V.B. Golub, DSc in Biology (Faculty of Medicine and Biology, Department of Ecology and Systematics of Invertebrates)

18-03-00354 Research project No. 18009 2018-2020

Development of fundamental basis of chemically-guided synthesis of nanoscale films on A3B5 semiconductors for opto- and microelectronics, and gas sensors

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

18-02-00053 Research project No. 18001 2018–2020

Precision spectroscopy of supercooled atoms

Head Researcher – Professor V.D. Ovsyannikov, DSc in Physics and Mathematics (Faculty of Physics, Department of Theoretical Physics)

18-01-00048 Research project No. 18002 2018-2020

Stochastic equations and inclusions with mean derivatives in vector spaces and on smooth manifolds

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

18-012-00476 Research project No. 18007 2018-2020

Aesthetic novelty and literariness as theoretical and creative practice issues of the 20th century: avantgardism of 1910-1930's and postmodernism of 1970–1980's

Head Researcher - Associate Professor A.A. Zhytenev, DSc in Philology (Faculty of Philology, Department of Humanities and Arts)

18-011-00806 Research project No. 18008 2018-2020

Adaptive potential of regional political systems under indeterminateness and risk (a case study of regions of the Central Black Earth region)

Head Researcher – Professor A.V. Glukhova, DSc in Politics (Faculty of History, Department of Sociology and Political Studies)



## **BASIC RESEARCH PROJECTS ORGANISED BY THE RUSSIAN FOUNDATION FOR BASIC RESEARCH AND THE VORONEZH REGION (4 PROJECTS)**

18-49-360007 Research project No. 18047 2018-2019

Archaeological sites of the Stone Age in the basin of the Upper and Middle Don: a history of discovery and study

Head Researcher – Associate Professor E.Yu. Zakharova, DSc in History (Faculty of History, Department of Archaeology and Ancient History)

18-49-360003 Research project No. 18048 2018-2019

Barbarian enamels in the forest steppe in the interfluvium of the Don and the Volga: issues of cultural and ethnical attribution

Head Researcher – Associate Professor I.V. Zinovievskaya, DSc in History (Faculty of History, Department of Archaeology and Ancient History)

19-45-360005 Research project No. 18044 2019-2021

Vertical differentiation of landscapes in the Voronezh Region

Head Researcher – Associate Professor A.S. Gorbunov, PhD in Geography (Faculty of Geography, Geoecology, and Tourism, Department of Physical Geography and Landscape Optimization)

19-45-360003 Research project No. 18043 2019-2021

Studying the patterns of the formation of ecological risks caused by household, drinking, and recreational water usage within the Don basin in the Voronezh Region

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

## **REGIONAL CONTEST OF BASIC RESEARCH PROJECTS CARRIED OUT BY YOUNG SCIENTIST (5 PROJECTS)**

19-49-363003 Research project No. 19049 2019-2020

South-western margin of the Slavic community at the time of formation of the Ancient Rus': an interdisciplinary study of the culture of the Slavs living along Don in the 8-10th centuries

Head Researcher – head fund keeper N.E. Arsenova (Archaeological Museum)

19-48-363008 Research project No. 19045 2019-2020

Potentiometric multisensor systems with nanomaterials based on perfluorinated membranes for the identification of vitamins and medicinal substances in food and pharmaceutical products

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

19-42-363013 Research project No. 19048 2019-2020

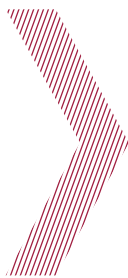
Characteristic features of the electronic and energy structure and specifics of the phase composition of composite layers during the formation of semi-insulating polycrystalline silicon (SIPOS) with preset properties

Head Researcher – head of the laboratory D.N. Nesterov, PhD in Physics and Mathematics (Faculty of Physics, Department of Solid State and Nanostructure Physics)

19-42-363007 Research project No. 19046 2019-2020

Managing the parameters of IR luminescence in multifunctional associates based on the indocyanine green dye and Ag<sub>2</sub>S quantum dots for cancer theranostics

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



19-42-363004 Research project No. 19047 2019-2020

**Specifics of porous silicon-based multilayer systems formation and their properties**

Head Researcher – senior research fellow A.S. Lenshin, PhD in Physics and Mathematics (Joint Laboratory Physics of Nanoheterostructures and Semiconductor Materials)

### RESEARCH PROJECTS CONTEST FOR YOUNG SCIENTISTS (MY FIRST GRANT) (11 PROJECTS)

18-35-00115 Research project No. 18020 2018-2019

**Genesis of terrigenous deposits of the Devonian period in the crestal position of the Voronezh anticline**

Head Researcher – senior engineer A.V. Milash, PhD in Geology (Research Institute of Geology, Complex Research Laboratory)

18-35-00058 Research project No. 18021 for 2018-2019

**Palaeoproterozoic volcanism of the Orlov-Timsk structure of the Kursk region of Eastern Sarmatia: geochronology, petrogenesis, and geodynamical environment**

Head Researcher – engineer S.V. Ysybulyaev (Research Institute of Geology, Department of Metamorphism and Ore Genesis Department)

18-33-01215 Research project No. 18022 2018-2019

**Synthesis and properties of thin-film CdS–ZnS solid solutions, doped by copper (silver) ions of thiourea solution coordination compounds**

Head Researcher – lecturer T.V. Samofalova, PhD in Chemistry (Faculty of Chemistry, Department of General and Inorganic Chemistry)

18-33-00900 Research project No. 18023 2018-2019

**Identification and stabilisation of new semiconductor phases in the A(III)–B(VI) systems**

Head Researcher – Associate Professor A.V. Kosyakov, PhD in Chemistry (Faculty of Chemistry, Department of General and Inorganic Chemistry)

18-32-01046 Research project No. 18024 2018-2019

**Atomic and electronic structure of the surface and formed boundaries in tracking composite nanostructures of nickel-porous oxidized silicon on silicon**

Head Researcher – researcher E.V. Parinova (Faculty of Physics, Department of Solid State and Nanostructure Physics)

18-32-00497 Research project No. 18025 2018-2019

**Photophysical and photochemical transformations in Ag<sub>2</sub>S colloid quantum dots**

Head Researcher – lecturer I.G. Grevtseva (Faculty of Physics, Department of Optics and Spectroscopy)

18-32-00493 Research project No. 18026 2018-2019

**Studying the nonlinear refraction and reverse absorption saturation in colloid solutions of CdS and ZnS colloid quantum dots conjugated with molecules of thiazine dyes**

Head Researcher – lecturer A.I. Zvyagin (Faculty of Physics, Department of Optics and Spectroscopy)

18-31-00097 Research project No. 18027 2018-2019

**Harmonic analysis of periodic and almost periodic at infinity functions and distributions from homogeneous spaces and semigroups of bounded operators**

Head Researcher – researcher I.I. Strukova (Faculty of Applied Mathematics, Informatics, and Mechanics, Department of System Analysis and Management)



18-31-00083 Research project No. 18028 2018-2019

Studying methods and solution algorithms for inconsistent linear equations systems, and nonlinear programming problems and their applications

Head Researcher – Associate Professor V.V. Volkov, PhD in Physics and Mathematics (Faculty of Technology and Pedagogics, Department of Natural and General Education Disciplines at the Borisoglebsk branch)

18-31-00354 Research project No. 18016 2018-2019

Harmonic analysis of differential operators

Head Researcher – researcher E.Yu. Romanova (Faculty of Applied Mathematics, Informatics, and Mechanics, Department of Mathematical Methods of Operations Research)

18-35-00532 Research project No. 19053 2018-2019

Modelling the distribution of the rare species of avifauna using GIS-technologies and distance probing

Head Researcher – lecturer D.V. Sarychev (Faculty of Geography, Geoecology, and Tourism, Department of Geoecology and Environmental Monitoring)

### **DIRECTED BASIC RESEARCH CONTEST FOCUSED ON CONTEMPORARY INTERDISCIPLINARY PROBLEMS (1 PROJECT)**

17-29-02505 Research project No. 17046 2017-2020

Molecular genetic features determining the effectiveness of eye tracking systems and brain-machine interfaces

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

### **BEST INTERDISCIPLINARY FUNDAMENTAL RESEARCH PROJECTS (4 PROJECTS)**

19-29-06075 Research project No. 19063 2019-2021

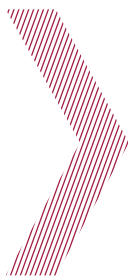
Location and identification of low-noise autonomous vehicles by means of hybrid autonomous underwater vehicles using acoustic holography

Head Researcher – Associate Professor S.A. Pereselkov, DSc in Physics and Mathematics (Faculty of Physics, Department of Mathematical Physics and Information Technologies)

19-29-07400 Research project No. 19064 2019-2021

Research and information tools for evaluating human resources as a driver of the digital economy

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



18-29-11062 Research project No. 18053 2018-2020

Synthesis of lithium niobate films for the element base of opto-, acousto-, and microelectronic devices

Head Researcher – Professor E.K. Belonogov, DSc in Physics and Mathematics (Faculty of Chemistry, Department of Materials Science and Nanosystems Technologies)

18-29-11008 Research project No. 18052 2018-2020

Biomimetical composites for regenerative dentistry, imitating the structure hierarchy, and peculiarities of the anisotropy of human dental tissue: the technology for production and fundamental research of the mechanisms of their integration with natural tissue

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

#### **BASIC RESEARCH PROJECTS CARRIED OUT BY THE RUSSIAN FOUNDATION FOR BASIC RESEARCH AND THE BELARUSIAN REPUBLICAN FOUNDATION FOR FUNDAMENTAL RESEARCH**

18-52-00037 Research project No. 18035 2018-2019

Femto-, pico-, and nanosecond dynamics of electronic excitation in dye molecule associates and quantum dots of metallic sulphides

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

#### **BASIC RESEARCH PROJECTS CARRIED OUT BY THE RUSSIAN FOUNDATION FOR BASIC RESEARCH AND THE GERMAN RESEARCH COMMUNITY**

17-52-12034 Research project No. 17049 2017-2019

Generation of the high harmonics using quantum dots

Head Researcher: senior research fellow R.A. Ganeev, DSc in Physics and Mathematics (Faculty of Physics, Department of Optics and Spectroscopy)

#### **BEST BASIC RESEARCH PROJECTS IN THE FIELD OF SOCIAL AND POLITICAL STUDIES CARRIED OUT BY THE RUSSIAN FOUNDATION FOR BASIC RESEARCH AND EXPERT INSTITUTE FOR SOCIAL RESEARCH (1 PROJECT)**

19-011-31293 Research project No. 19023 2019

Domestic policy agenda as a unity factor in today's Russia

Head Researcher – Professor A.V. Glukhova, DSc in Politics (Faculty of History, Department of Sociology and Political Studies)



### **BEST BASIC RESEARCH PROJECTS CARRIED OUT BY POSTGRADUATE STUDENTS (7 PROJECTS)**

19-38-90326 Research project No. 19055 2019-2021

**Holographic technique for processing acoustic information in randomly heterogeneous, nonstationary ocean waveguides**

Head Researcher – Associate Professor S.A. Pereselkov, DSc in Physics and Mathematics (Faculty of Physics, Department of Mathematical Physics and Information Technologies)

19-37-90163 Research project No. 19056 2019-2021

**Studying the methods of formation of ultra-short impulse signals for radioelectronic and location systems**

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

19-37-90161 Research project No. 19057 2019-2021

**Synthesis and analysis of dielectric structures for enhancing the characteristics of ultra-wideband antennas**

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

19-35-90021 Research project No. 19058 2019-2021

**Research and information tools for assessing the degree of differentiation of social and economic development of the municipal districts of the Voronezh Region**

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

19-34-90110 Research project No. 19059 2019-2021

**The effect of the metabolic modulators of fatty acids on the mitochondrial dynamics of ageing mice**

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

19-32-90234 Research project No. 19060 2019-2021

**Alterations in the optical properties of SiO<sub>x</sub> films during the crystallisation of silicon nanoclusters by means of pulsed photon annealing**

Head Researcher – Professor V.A. Terekhov, DSc in Physics and Mathematics (Faculty of Physics, Department of Solid State and Nanostructure Physics)

19-32-90204 Research project No. 19061 2019-2021

**Spectroscopic characteristics of Rydberg states of atoms and molecules for the problems of physical astronomy and laser physics**

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



## CONTEST OF BASIC RESEARCH PROJECTS CARRIED OUT BY YOUNG SCIENTISTS WITH PHD OR DSC DEGREES IN SCIENTIFIC ORGANISATIONS OF THE RUSSIAN FEDERATION (2 PROJECTS)

19-32-50038 Research project No. 19012 2019

Studying the morphological, physicochemical, and optical properties of por-Si based matrices depending on their formation and functionalization methods

Head Researcher – senior research fellow A.S. Lenshin (Joint Laboratory of Physics of Nanoheterostructures and Semiconductor Materials)

19-32-50032 Research project No. 19011 2019

Studying the mechanisms of changes in the phase transformations, dielectric, and switch characteristics of thin ferroelectric films depending on their thickness and the conditions under which the films are conjugated with the substrate

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

## ORGANISING AND HOLDING SCIENTIFIC EVENTS

19-05-20079 Research project No. 19009 2019

International scientific and practical conference “Global Climatic Changes: Regional Effects, Models, and Forecasts”

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

19-014-20008 Research project No. 19021 2019

International scientific conference “Regional Strategies of International Security: Russia, the EU, and the Middle East”

Head Researcher – Associate Professor A.V. Akulshina, PhD in History (International Relations office)

19-011-20008 Research project No. 19010 2019

International scientific conference “Law Enforcement and its Institutional Framework”

Head Researcher – Associate Professor V.V. Denisenko, PhD in Law (Faculty of Law, Department of Theory and History of State and Law)

19-012-2001 Research project No. 19022 2019

International scientific conference “8th Platonov Readings. Andrei Platonov and Artistic Strivings of the 20th Century: Issues of Perception”

Head Researcher - Associate Professor A.A. Zhytenev, DSc in Philology (Faculty of Philology, Department of Humanities and Arts)

19-010-20069 2019

42nd international conference (scientific workshop) “System Modelling of Social and Economic Processes” in the 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)



## 5.8. CENTRE FOR COLLECTIVE USE OF SCIENTIFIC EQUIPMENT (CCUSE)

### ABOUT THE CENTRE FOR COLLECTIVE USE OF SCIENTIFIC EQUIPMENT

The Centre for Collective Use of Scientific Equipment is one of the official research units of the Russian Federation registered on [www.ckp-rf.ru](http://www.ckp-rf.ru) website. Its activity is monitored by the Ministry of Science and Higher Education of the Russian Federation.

The Centre for Collective Use of Scientific Equipment of Voronezh State University is a scientific and organisational division housing 35 units of modern scientific and analytical equipment, such as the unique computer-assisted laboratory facilities PCM-500. The centre employs highly qualified researchers who are able to carry out scientific studies and provide services (research, experiments, measurements) to various customers including external agencies (Table 5.7, 5.8).

### CONTACTS

**Director:** **Alexander A. Sinelnikov,**  
PhD in Physics and Mathematics

**Head Researcher:** **Oleg A. Kozaderov,**  
DSc in Chemistry, Vice Rector for Research and Innovations

**Address:** Universitetskaya ploschad, 394018, Voronezh

**Phone:** +7 (473) 228-11-60 (IP 3006)

**E-mail:** [ckp-vsui@mail.ru](mailto:ckp-vsui@mail.ru)

Table 5.7

### KEY INFORMATION ABOUT THE ACTIVITIES OF THE CENTRE FOR COLLECTIVE USE OF SCIENTIFIC EQUIPMENT IN 2019

Book values of equipment, million roubles	177
Number of units of equipment valued at over 1 million roubles	27
Number of staff members	12
Total number of works (services) carried out by the university with the help of CCUSE equipment, million roubles	18
Actual equipment loading,%	82
Actual CCUSE equipment loading on behalf of third parties,%	42
Number of organisations (external agencies)	17

In the reporting year, CCUSE met key progress indicators developed by the Ministry of Education of the Russian Federation.





Table 5.8

## MOST IMPORTANT EQUIPMENT OF CCUSE VSU AS OF 2019

Name of the equipment	Manufacturing company	Country of manufacture	Application, specifications
X-ray diffractometer Thermo ARL X'TRA	Thermo Fisher Scientifics	Switzerland	Structural and phase analysis of crystalline materials in situ study in a vacuum chamber at up to 1,000°C
Electron microscope JSM-6510LV	JEOL Ltd	Japan	Study of surface morphology within the range of 150,000x magnification. Microanalysis of the elemental composition, including mapping
Scanning probe microscope SOLVER P47	NT-MDT	Russia	Study of the surface of solid material in the modes of atomic force microscopy and tunnel probe microscopy. Visualisation of the surface microrelief. Qualitative relief assessment at the spacing up to 180 4 180 µm. Mapping of elements with different electrical conductivity and magnetic properties in the mode of the tunnel microscope
Libra 120 transmission electron microscope (fig. 5.5)	Carl Zeiss	Germany	Study of structure, substructure, and phase analysis of solids in volume as thin as 0.2 nm.
X-ray diffractometer Empyrean B.V. (fig. 5.6)	PANalytica	The Netherlands	Structural and phase analysis of crystalline materials
Primo Star optical microscope	Carl Zeiss Microscopy	Germany	Microscopy of microbiologic preparations
Versatile centrifuge Z 36 NK	Hermle	Germany	Centrifugation of complex biological mixtures
QUANT-Z-ETA-1 atomic absorption spectrometer	OOO Kortek	Russia	Quantitative determination of elements in liquid samples of various origin and composition at the level of ng/L
U-2900 double beam spectrophotometer	Hitachi	Japan	Double beam optical system. Spectral range within 190 and 1,200 nm
A system for carrying out materials testing in vacuum and under UV radiation	OOO Vakuumnye sistemy i elektronika, Anest Iwata	Russia, Japan	Samples vacuuming up to 10 <sup>-4</sup> Pa. Applying electromagnetic radiation in ultraviolet spectra
Nikon ECLIPSE Ni-E/Ni-U optical microscope	Nikon	Japan	Upright Hi-End microscope Optical system CF160 (infinity optics). Resolution up to 0.2 µm

End of table 5.8

Name of the equipment	Manufacturing company	Country of manufacture	Application, specifications
Upright polarized-light microscope Olympus BX51	Olympus	Japan	Optical microscope works in the following modes: light field, dark field, phase contrast, polarized light, fluorescence, and Nomarski DIC (differential interference contrast) Up to 150x magnification range
Gas chromatograph – Agilent 7890B/5977A mass spectrometer	Agilent Technologies	The USA	Separation of mixtures and mass spectrometry analysis of organic compounds
Agilent 6230 accurate-mass time-of-flight (TOF) LC/MS system	Agilent Technologies	The USA	Separation of mixtures and mass spectrometry analysis of organic compounds and study of organic reaction mechanisms
Milestone MicroSynth microwave synthesis system	Milestone	Italy	Controlled synthesis of organic compounds exposed to microwave radiation
Chemical vacuum station PC 3004 Vario	Vacuubrand	Germany	Creating controlled vacuum for synthesis and extraction of organic compounds
SONICATOR Q500 ultrasonic dispergator	QSONICA	The USA	Sample preparation, Preparation of suspended solids by ultrasound
System Zetasizer Nano ZSP	Malvern	England	Size characterisation of organic and inorganic nanoparticles within the range of 0.3-10 µm
Rotary ultramicrotome for electron microscopy PT-PC 75840	RMC-Boeckeler	The USA	A PC controlled ultramicrotome performs ultra-thin sectioning for their further study by means of transmission scanning electron microscopy, atomic-force microscopy, scanning probe microscopy, or optical microscopy. The precise feed technology allows obtaining sections from 5 nm to 10 µm.
S8 Tiger X-ray diffractometer (fig. 5.7)	Bruker	Germany	Complex for elemental X-ray fluorescence analysis in such industries as petroleum chemistry, cement production, and extraction of minerals
VERTEX 70 series FT-IR spectrometer	Bruker Optik GmbH	Germany	Vertex 70 series FT-IR spectrometer with vacuum optical system enables maximum sensitivity in in near, medium, and far IR (THz) band and eliminates the effects of carbon and water vapour on the quality of the spectra
UV-2550 spectrophotometer	Shimadzu Scientific Instruments	Japan	Double monochromator with wavelength range of 190-900 µm
Shimadzu 2501 spectrophotometer	Shimadzu Scientific Instruments	Japan	Double beam optical system with wavelength range of 190-1100 µm

## MOST VALUABLE EQUIPMENT OF CCUSE VSU

Figure 5.5

ZEISS LIBRA 120 TRANSMISSION ELECTRON MICROSCOPE



Figure 5.6

PANALYTICA EMPYREAN B.V. X-RAY DIFFRACTOMETER



Figure 5.7

BRUKER S8 TIGER X-RAY DIFFRACTOMETER





## 5.9. VSU INNOVATION FINANCIAL SUPPORT IN 2019

In 2019, the work of VSU's Department of Innovations and Enterprise Management was aimed at collaboration with the university's business partners. As a result of this collaboration the university's infrastructure was enhanced.

- A laboratory of the Faculty of Applied Mathematics, Informatics, and Mechanics was renovated (including new furniture and equipment) with the help of DOM.RF.
- AO *PKK Milandr* financed the renovation of two laboratories of the Faculty of Physics and purchased the equipment.
- In 2019, INTERKHOS opened a robotics laboratory at VSU.
- In cooperation with the company SIBUR, VSU began the redecoration of a laboratory at the Faculty of Chemistry.
- PAO *Sberbank* financed the Laboratory of Artificial Intellect opened by the Faculty of Applied Mathematics, Informatics, and Mechanics.
- ROSTELECOM will finance the renovation of a large lecture hall.

The total financing of infrastructure development in 2019 is estimated to be over 10 million roubles.

VSU also concluded 9 license agreements and agreements on the cession of intellectual property rights, with total amount of 0.55 million roubles.

The cost of consulting services for SIBs totalled 110 thousand roubles. The dividends received by the university totalled 220 thousand roubles. VSU SIBs provided equipment, organised internships for students, and paid for the renovation and maintenance of university premises with a cost of 1 million roubles. VSU SIBs also provided employment for VSU staff members with the payroll budget of over 30 million roubles. Due to the support of grant and subsidy applications, VSU's SIBs received about 1.6 million roubles from the regional budget.

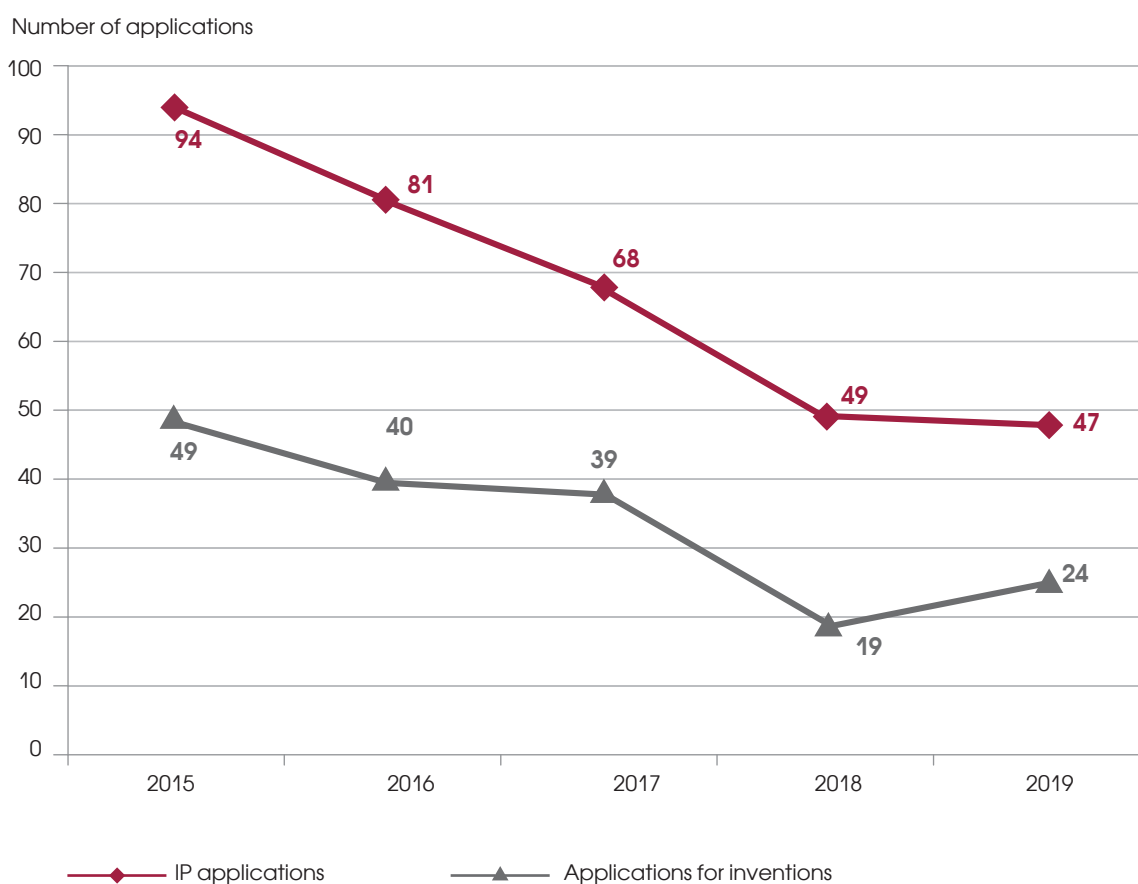
The funding of federal and regional competitions ("U.M.N.I.K.", the Innovation Cup, etc.) amounted to over 2 million roubles.

## 5.10. VSU PATENT ACTIVITY IN 2015-2019

In 2019, patent and license activities continued to be enhanced. VSU's academic staff created 47 copyrightable intellectual property items. 22 applications for certificate registration and 1 application for a utility model patent of the Russian Federation were submitted. The total number of applications for inventions filed was 24, which is 20% higher as compared to 2018 (fig. 5.8).

Figure 5.8

### APPLICATIONS FOR INTELLECTUAL PROPERTY ITEMS (2015-2019)



The data on the number of intellectual property items created in 2019 is comparable with the results of 2018. The decrease in the number of patent and registration certificate applications reached its all-time minimum over the last five years. This indicates the stability of the intellectual property policy.

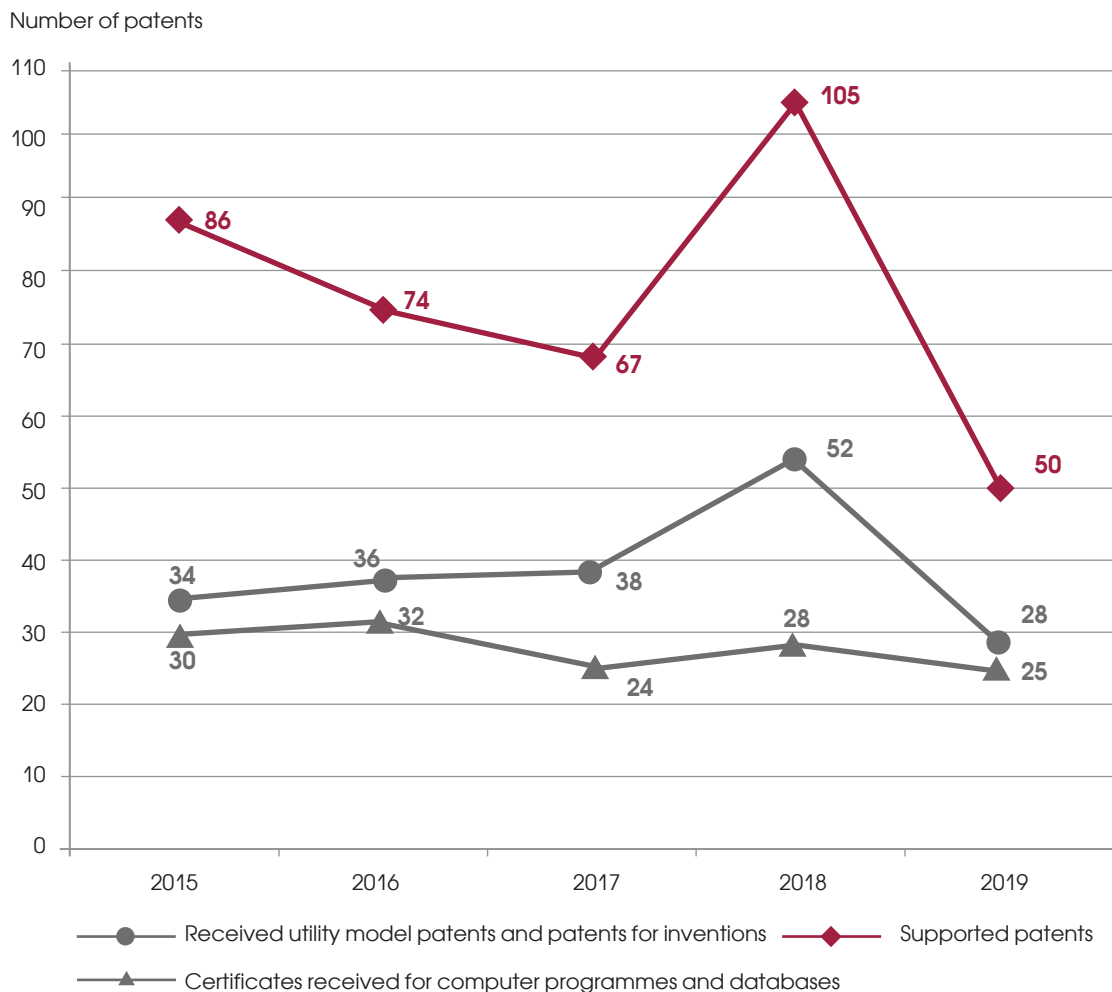


In 2019, the number of intellectual property items protected by the laws of the Russian Federation amounted to 28 items, including 1 utility model patent and 27 patents for inventions. Moreover, the total number of computer programmes and database registration certificates amounted to 25.

The decrease in the number of received patents is due to the case-specific approach in relation to the choice of a protection strategy and the character of preliminary examination of market potential of the suggested copyrightable intellectual property items. This allowed minimising the costs of different state duties. Over 300 thousand roubles were spent in 2019. (fig. 5.9).

Figure 5.9

### VSU PATENT ACTIVITY (2015–2019)



According to the intellectual property strategy, VSU supported over 50 patents with high commercial potential as of the end of 2019.

## 5.11. DYNAMICS OF IP APPLICATIONS PER FACULTY

The monitoring of patent activity per faculty has been carried out over the last ten years. Due to the fact that the protected patent law objects are technical solutions related to an approach or a product, the following science faculties show the most patent activity: the Faculty of Biomedical Sciences, the Faculty of Computer Sciences, the Faculty of Pharmaceutics, the Faculty of Physics, the Faculty of Chemistry, the Faculty of Applied Mathematics, Informatics, and Mechanics, and the Faculty of Geography, Geoecology, and Tourism (table 5.9).

Table 5.9

### DYNAMICS OF IP APPLICATIONS IN 2015-2019

Faculty	2015	2016	2017	2018	2019
Faculty of Biomedical Sciences	10	11	12	12	13
Faculty of Computer Sciences	23	8	9	13	5
Faculty of Pharmaceutics	13	4	7	5	5
Faculty of Physics	6	11	8	1	10
Faculty of Chemistry	15	19	11	4	3
Faculty of Applied Mathematics, Informatics, and Mechanics	13	22	13	12	10
Faculty of Geography, Geoecology, and Tourism	1	–	3	1	–
Other subdivisions	13	4	5	1	1
<b>Total</b>	<b>94</b>	<b>79</b>	<b>68</b>	<b>49</b>	<b>47</b>

Comparative analysis of statistical data for 2015–2019 indicates a permanently high number of applications for inventions submitted by the staff of the Faculty of Biomedical Sciences. The Faculty of Physics also showed high patent activity in 2019.

The Faculty of Applied Mathematics, Informatics, and Mechanics and the Faculty of Computer Sciences show the highest number of officially certified software products over the past 5 years.

## 5.12. INNOVATIVE VENTURES DEVELOPMENT

In 2019, the total revenue of small innovative businesses opened with the help of VSU exceeded 78 million roubles.

Table 5.10

### THE LIST OF SIBS FUNCTIONING IN 2019

No.	SIB name	Founded in
1	OOO AKMA-Universal	2010
2	OOO TechnoChim	2010
3	OOO Institute of corrosion	2010
4	OOO Laboratory of innovations	2011
5	OOO Centre for consulting services and innovative technological solutions for geology "Tsitrin"	2011
6	OOO Nanoimpulse	2011
7	OOO Voronezh enterprise of ecological soil monitoring	2011
8	OOO Technologies of Bumblebee-Keeping	2011
9	OOO Innovation Expert Enterprise "Ecotechnologies"	2012
10	OOO RPE "Hydrogeocentre – VSU"	2012
11	OOO PlazmoSil	2012
12	OOO Bioint	2012
13	OOO Institute of system biotechnologies	2012
14	OOO Basic information technologies B	2013
15	OOO Efficient Management Centre	2013
16	OOO VSU Consulting Centre	2013
17	OOO NPO "Membranes"	2014
18	OOO I-Expert Group	2015
19	OOO RST	2015
20	OOO Profftsentr "Perspektiva"	2015
21	OOO Smileoptic	2016
22	OOO Centre for the transfer of high molecular compound chemistry technologies	2016
23	OOO BFSoft	2017
24	OOO A-Systems	2017
25	OOO BRENNEN	2018
26	OOO Group KVL	2018
27	OOO I-Technology-Engineering	2018



### 5.13. OVERVIEW OF THE VSU ENGINEERING CENTRE

Voronezh State University continues working in the framework of state support of projects for the creation and development of engineering centres based on higher educational institutions subordinate to the Ministry of Education and Science of the Russian Federation.

One of the most important aims of the project is to provide for engineering-based introduction of effective technologies for the development of glass sand deposits with the concurrent extraction of strategic marketable raw materials. Another objective is the development of import-substituting production by means of the research, innovative, human resources, engineering, technological, and information capacities of the centre.

In 2019, the engineering centre I-Technology continued its successful activities and met key progress indicators:

- New special-purpose equipment for the enrichment of mineral resources worth over 27.96 million roubles was acquired.
- Contracts worth over 38.64 million roubles were signed within the project.

Conditions are being developed for cooperation with potential customers and consumers of engineering services and activities:

1. OAO Voronezhskoye rudoupravlenie (Voronezh)
2. AO Primorzoloto (Moscow)
3. OOO DMSTR (Moscow)
4. OOO SILIKASTROY (Voronezh region, Liski)
5. OOO Guardian Glass Rostov (Rostov region, Krasny Sulin)
6. ZAO Khokholsk sand quarry (Voronezh)
7. AO Cherepovets liteyno-mekhanichesky zavod (Cherepovets)
8. PAO Corporation VSMPO-AVISMA (Sverdlovsk region, Verkhnyaya Salda)
9. OOO Nerudtrans (Voronezh)
10. OOO GeoResurs (Voronezh)
11. OOO Nikolsky GOK (Voronezh)
12. OOO QuartzGroup (Voronezh)
13. OOO GlobalGeologia (Voronezh)
14. OOO StroyInvest (Voronezh)
15. OAO Chugonoliteinyi zavod BKMZ (Borisoglebsk)



16. ООО Gornoobogatitelnaya kompaniya "Voronezhskiy nedra" (Voronezh)
17. ООО Formaterialy (Voronezh)
18. ОАО Koltsovgeologia (Yessentuki)
19. ООО AGC Flat Glass Klin (Klin)
20. ОАО Saratovskiy insitut stekla (Saratov)
21. ООО Pilkington Glass (Moscow region, Zhukovo village)
22. ОАО Saratovstroysteklo (Saratov)
23. АО Scherbinsky zavod electropavlennykh ogneuporov (Scherbinka)
24. ООО Ilsky stroitel (urban-type settlement Ilyinsky)
25. ООО Noginsky kombinat stroitelnykh smesey (Noginsk)
26. ОАО Opytny zavod sukhikh smesey (Moscow)
27. ООО Khimzaschita (Balashikha)
28. ООО SMT product (Voronezh)
29. ОАО Prompribor (Livny)
30. ОАО Izhevsk Mechanical Plant (Izhevsk)

## 5.14. VSU INNOVATION BUSINESS INCUBATOR

In 2019, the activity of the VSU Innovation Business Incubator was focused on the following areas.

1. Promotion of key R&D projects of VSU researchers and small innovation businesses at exhibitions and presentation platforms (the gold medal at the Moscow International Inventions and Innovative Technology Salon "Archimedes – 2019"; participation in the forums "Open Innovations", "VUZPROMEKSP0", etc.).
2. Organisation and holding of regional events.

Quick expertise of innovative ideas submitted to the "Rules of development" competition was conducted with the support of the Business Incubator. Webinars providing consultancy support to innovation businesses were successfully organised on the request of the Agency for Innovation and Development of Economic and Social Projects. In order to improve the effectiveness of the development of innovative potential, employees of the Business Incubator actively participated in various discussions platforms (Industrial Forum, W. Stoll Award, Internet forum RIF, Business Community Forum, etc.) held by regional organisations.

3. Organisation, consultative, and administrative support of innovative projects by VSU students and staff submitted for the contest held between Voronezh universities "Innovation cup – 2019".

In 2019, VSU representatives took the first and the third prizes. VSU has been acknowledged as the best innovative university in the region for the fourth time in this contest. All the winners were awarded grants with a total amount of 920 thousand roubles.

4. Preparing VSU students for participation in the Youth Scientific and Innovation Competition ("U.M.N.I.K.").

Three winners were awarded grants with a total amount of 1.5 million roubles.

5. Monitoring and support of VSU SIBs activities.

The cost of consulting services for SIBs totalled 110 thousand roubles. The dividend income received amounted to 220 thousand roubles. VSU SIBs provided equipment and paid for the renovation and maintenance of university premises as well as provided services associated with engineering practical training for students with the cost of 1 million roubles. In addition, VSU SIBs employed VSU staff members with a total salary fund exceeding 30 million roubles. Due to the support of grant and subsidy applications, VSU SIBs received over 1.6 million roubles from the regional budget.

6. Intellectual property management.

In 2019, the Business Incubator participated actively in the implementation of measures for management and commercialisation of intellectual property. Full support of the document flow on reception/disposal of intangible assets was provided; the obligations under license agreements of intellectual property use were fulfilled.

# 55

## 5.15. VSU R&D PROJECT DATABASE

In 2019, to enhance the efficiency of events aimed at fulfilling VSU's innovative potential, the VSU Atlas of Innovative Projects was updated and supplemented (fig. 5.10).

Figure 5.10

### COVER OF THE ATLAS OF VSU'S INNOVATIVE PROJECTS



The atlas is presented in two forms:

- An electronic version published on the university's official website: <https://www.vsu.ru/ru/university/docs/news/atlas.pdf>.
- An illustrated printed brochure.

## 5.16. VSU'S ALUMNI ASSOCIATION

VSU's Alumni Association was founded in December 2012 in order to maintain contact with the university graduates, help graduates to stay in touch with each other, and involve them in joint projects.

The number of graduates in the database currently stands at over 16 thousand people. In 2019, the association collected a lot of new data and established contacts with a large number of graduates. Thus, the registration of graduates for a big reunion meeting in September provided information about 1000 VSU graduates of various years and extended the association's database.

The association is currently collecting information about the graduates of the 2019/20 academic year. It is expected that 5 thousand more graduates will be included in the database.

Table 5.11

### NUMBER OF REGISTERED MEMBERS ACCORDING TO THE YEAR OF GRADUATION

Graduation year	Number of registrants	Graduation year	Number of registrants
Before 1980	72	2013/14	142
1981–1990	81	2014/15	188
1991–2000	111	2015/16	1,235
2001–2010	206	2016/17	4,132
2010/11	56	2017/18	5,090
2011/12	70	2018/19	5,191
2012/13	85	<b>Total</b>	<b>16,659</b>

The main activities of VSU's Alumni Association in 2019.

- VSU's Alumni Association was selected as one of the winners in the contest for grants of the President of the Russian Federation aimed at the development of civil society. As a result of the first contest, the Federal Student Tournament of Three Sciences became the winner again. The project received 82.5 points out of 100. The project was successfully completed (duration of the project: from 1 November, 2018 to 30 September, 2019). The grant amounted to 4,017,190 roubles. In addition to students from all federal districts of Russia, student teams from neighbouring countries (Ukraine, Belarus, Luhansk people's republic) took part in the project implementation for the first time. The project also won the first contest in 2019 and is now being implemented.



- In November 2019, VSU hosted the third charity concert “It is only with the heart that one can see rightly” dedicated to the Generous Tuesday international campaign. Children from the family centre “Mamina Radost” participated in the charity concert. All the money raised was given to the DobroSvet foundation for the treatment of children with oncological diseases. 104 thousand roubles were raised in 2018 and 78 thousand roubles in 2019.

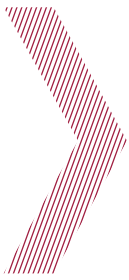
More information about the activities of the VSU Alumni Association as well as photo and video reports of the events can be found on the Association’s website [www.alumni.vsu.ru](http://www.alumni.vsu.ru) and on a public page on the Vkontakte social networking site at [https://vk.com/alumni\\_vsu](https://vk.com/alumni_vsu).

## **5.17. GRADUATES EMPLOYMENT ASSISTANCE ACTIVITIES AND ANALYTICS ON EMPLOYER-SPONSORED STUDENTS**

The demand for the university graduates on the labour market is one of the most significant indicators of the quality of their training. The issue of employment of young specialists has recently been of great importance. To solve this issue, the Centre for Career Development, which assisted in the employment of VSU graduates, opened the Career Development and Business Partnership Department (CDBPD) following the Order of the Rector No.35 dated 27 January 2017. Career guidance and graduate employment assistance present the priority area for CDBPD. In order to improve the university’s efficiency, in 2017 CDBPD started collaborating with business partners and regional authorities on implementation of various regional projects and programmes, attraction of partners, including fund raising for the VSU Endowment Fund and the employment of graduates.

### **EMPLOYMENT ASSISTANCE RESULTS (VSU INNER SYSTEM)**

- A job bank.
- A repository of information about the graduates (containing their CVs).
- Events aimed at the involvement of students in preparing for employment and the development of their professional careers.
- Individual consultations for students regarding their readiness for professional self-determination and planning their professional career.
- Psychological support for students aimed at their successful self-determination on the labour market.
- Employment monitoring within one calendar year after the year of graduation.



## ORGANISATIONAL AND METHODOLOGICAL SUPPORT OF THE CDBPD'S ACTIVITIES IN 2019

1. Extending the database of potential employers (agreements with enterprises on students' internships, cooperation agreements on graduates' employment, etc.).
2. Providing senior students and graduates with information from the job bank of regional employment bodies (cooperation with Voronezh Region Employment Department).
3. Organisation of events contributing to the successful employment of students and graduates (career fairs, young specialists' 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 contact with students aimed at obtaining information about the jobs of employed graduates and providing unemployed graduates with information from the job bank and employment assistance according to their field of study.

### USING INFORMATION RESOURCES

As of the beginning of 2020, Career Development and Business Partnership Department has been actively developing its graduate employment assistance system:

- The Centre for Career Development on VSU's official VKontakte group is functioning effectively (the number of followers is 2018 people).
- The department's Instagram account "vsucareer" is being actively promoted (the number of followers is 354 people).

### ORGANISATION OF GRADUATE EMPLOYMENT ASSISTANCE EVENTS

In total, VSU has 143 existing cooperation agreements. Within their frameworks the CDBPD organised and held professional orientation events, aimed at assisting graduates in finding employment: such as Career Day, excursions to partner enterprises, and educational workshops. The information about these events is presented in Table 5.12.

Table 5.12

## EMPLOYERS INVOLVEMENT IN THE VSU EDUCATIONAL PROCESS

Company	Date Number of hours	Event
Series of free lectures by Red Collar	19.01.2019 8 hours	Educational module for students on digital industry by DGTL.TRI
Phase of the "Career breakthrough" programme by EFKO	11.02.2019 2 hours	EFKO Group of Companies and Biruch-NT Innovation Centre (EFKO's R&D) started a student programme "Career breakthrough" at Belgorod State University. It included the selection of students, an introduction to corporate culture, training, internships, and employment
Phase of the "Career breakthrough" programme by EFKO	13.02.2019 2 hours	EFKO Group of Companies and Biruch-NT Innovation Centre (EFKO's R&D) started a student programme "Career breakthrough" at Belgorod State University. It included selection of students, introduction to the corporate culture, training, internships, and employment
"Voronezhsintezkauchuk"	20.02.2019 6 hours	AO "Voronezhsintezkauchuk" is one of the largest producers of high-quality rubber and thermoelastoplasts in Russia. Excursion for students of the Faculty of Geography, Geoecology, and Tourism
Memorandum of cooperation between Dom.Rf and VSU was signed.	27.02.2019 4 hours	Memorandum of cooperation between Alexander Plutnik, Director General of Dom.Rf, and VSU Rector Dmitry Endovitsky was signed in the presence of Igor Schegolev, Presidential Plenipotentiary Envoy to the Central Federal District, and Alexander Gusev, Governor of the Voronezh Region
VSU Career Day, building No. 5 (40 ul. Kholzunova), Gilyarovskaya classroom	4.02.2019 4 hours	Professional orientation events attended by a great number of companies and aimed at the employment of students
VSU Career Day, main building (1 Universitetskaya Ploschad), auditorium	11.02.2019 4 hours	Professional orientation events attended by a great number of companies and aimed at the employment of students
Mail.ru. Presentation of projects for ambassadors	19.02.2019 2 hours	The biggest IT company in Russia announced the admission of ambassadors
Student case camp StudStok	from 19.04.2019 to 24.04.2019 4 hours	Student forum with a chance to develop their business ideas and learn from the sponsors' suggestions
Meetup by DSR Corporation	3.04.2019 4 hours	Blockchain talk for those interested in blockchain technologies and their role in business
Open Day at "Dom.ru" company	19.09.2019 2 hours	Open Day at a big federal company "Dom.ru"
Fourth management platform named after V.N. Eitingon	18.09.2019 2 hours	The Fourth management platform named after V.N. Eitingon was held in the main building of VSU by the Centre for Effective Government of the Voronezh Region
Meeting with representatives of the Krasnodar Higher Military School named after General S. M. Shtemenko	19.09.2019 2 hours	Advertising campaigns among the students eligible for military service offering to join the research squadron of the Krasnodar Higher Military School
Publik talk by PepsiCo	19.09.2019 2 hours	Presentation for journalists and partners
Project "Tele2 scholarships", VSU, building No. 5 (40 ul. Kholzunova), Gilyarovskaya classroom	26.09.2019 2 hours	Information meeting with students where the representatives of the company told them about the project, fields of studies and mentors, answered all the questions of interest, and met the previous year's winner



End of table 5.12

Company	Date Number of hours	Event
Project "Tele2 scholarships", main building (1 Universitetskaya Ploschad), auditorium	26.09.2019 2 hours	Information meeting with students where the representatives of the company told them about the project, fields of studies and mentors, answered all the questions of interest, and met the previous year's winner
Career Day by Sberbank	9.10.2019 8 hours	Lectures and workshops, internships at Sberbank, career possibilities and job offers for students, experts' answers to all the questions of interest
Internet technologies festival RIF-Voronezh	from 19.10.2019 to 20.10.2019 4 hours	Lectures and workshops from leading marketing specialists, managers, designers, and experts in the field of Digital, SMM, CEO
VSU Career day, building No. 5 (40 ul. Kholzunova), Gilyarovskaya classroom	15.10.2019 4 hours	Professional orientation event attended by a great number of companies and aimed at the employment of students
VSU Career Day, main building (1 Universitetskaya Ploschad), auditorium	22.10.2019 4 hours	Professional orientation event attended by a great number of companies and aimed at the employment of students
A course for students "Career in a bank. From intern to manager" by DOM.RF	from 26.10.2019 to 31.12.2019 72 hours	The course included several modules, the graduates received certificates
SIBUR Challenge data analysis contest Online problem solving training, meetings with experts	from 21.10.2019 to 17.11.2019 8 hours	Students had a chance to create real solutions that can be introduced into production and competed for 1,000,000 roubles and other prizes
SIBUR Challenge data analysis contest Offline interface design, presentations of participants, award ceremony	from 23.10.2019 to 24.10.2019 8 hours	Students had a chance to create real solutions that can be introduced into production and competed for 1,000,000 roubles and other prizes
Lecture "Learning to sell. Sell yourself" by "Dom.ru"	13.11.2019 2 hours	Open lectures were delivered by: Alexandr Novokhatsky, sales department supervisor of the b2c brand "Dom.ru" of AO "ER-Telecom Holding". Dmitry Kholodkov, marketing manager of the b2c brand "Dom.ru" of AO "ER-Telecom Holding"
"Teacher in Russia" programme	23.11.2019 2 hours	The "Teacher in Russia" programme started its sixth season and is looking for the best teachers all over the country
Contest by PWC	04.12.2019 8 hours	The contest consists of several stages and involves solving cases in order to get a regional scholarship
Networking Club 10.0 by Sberbank	18.12.2019 2 hours	A marathon of goal-setting, financial planning, and goal-setting practice
Lecture "Personal financial management"	19.12.2019 2 hours	Alexander Popov, CEO of the personal financial management service EasyFinance talked about the future with mobile payments and virtual banks, FinTech market, and cryptocurrencies
"Project-F" by "Dom.RF"	28.12.2019 4 hours	"Project-F" is a paid educational programme in project financing by "Dom.RF"

The number of VSU graduates who applied to Employment centres reduced from 36 in 2018 to 24 in 2019, and the number of graduates registered as unemployed reduced from 29 in 2018 to 20 in 2019. The information of the Employment centre on VSU graduates is presented in table 5.13.



Table 5.13

VSU STUDENTS WHO GRADUATED IN 2019 AND APPLIED TO EMPLOYMENT SERVICE BODIES OF THE VORONEZH REGION AS OF 31 DECEMBER 2019

Profession	Field of study	Degree	Number of graduates who applied to employment service bodies	Including the number of graduates registered as unemployed	Including those who were unregistered due to:			Registered as of 31.12.2019
					Employment	Vocational training	Long period of absence	
Higher professional education								
Specialist's degree	Geology	Master's degree	4	2	2		1	1
	Ecology and Natural Resource Management	Bachelor's degree	1	1				
	Economics	Specialist's degree	2	2		1		1
	Jurisprudence	Bachelor's degree	1				1	
	Biology	Bachelor's degree	1	1		1		
	Philology	Master's degree	1	1	1			
	Psychology	Bachelor's degree	2	2	1		1	
	International Relations	Master's degree	1	1				
	Linguistics	Bachelor's degree	1	1				1
	Economics	Bachelor's degree	1	1				1
	Television	Bachelor's degree	1	1			1	
Pharmacist	Pharmacy	Specialist's degree	1	1	1			
Teacher-psychologist	Pedagogics and Psychology	Master's degree	1	1			1	
Teacher	Pedagogics	Master's degree	1	1				1
Physicist	Physics	Bachelor's degree	1	1			1	
Economist	Economic Security	Specialist's degree	1	1				1
Manager	Management	Specialist's degree	1	1	1			
Economist	Economics	Bachelor's degree	2		2			
Lawyer	Jurisprudence	Bachelor's degree	2	2			1	1
<b>Total:</b>			<b>26</b>	<b>21</b>	<b>8</b>	<b>2</b>	<b>7</b>	<b>7</b>
Secondary vocational education								
Profession	Field of study	Number of graduates who applied to employment service bodies	Including the number of graduates registered as unemployed	Including those who were unregistered due to employment				Registered as of 31.12.2019
Accountant	Economics and accounting	1	1	1				
Programming technician	Programming in computer systems	1	1					1
<b>Total:</b>		<b>2</b>	<b>2</b>	<b>1</b>				<b>1</b>



The data presented by the graduates' employment portal of the Ministry of Education and Science of Russia shows that in 2019, 73% of VSU's graduates were employed, of whom 67% completed full-time education programmes, and 62% found jobs in the Voronezh Region. The average salary of the graduates also slightly decreased from 31,556 roubles in 2018 to 31,286 roubles in 2019.

In 2020, in order to enhance the effectiveness of graduate employment, the university is going to introduce new mechanisms and tools of interaction with prospective employers which will provide for better communication between VSU graduates and their employers. These tools and mechanisms include the following:

- Active use of Stazhirovka.ru, HeadHunter, and Rabota.ru by students, which are the most effective websites used by recruitment agencies.
- Collecting and processing statistical data about graduate employment, their job positions, and average salary by means of surveys at the region's enterprises. This will help to attract the attention of partner companies, create a competitive environment in the choice and employment of the best graduates, and encourage the motivation of VSU graduates to find employment within their speciality at VSU's partner companies.
- Organising professional orientation events at the university and its faculties with the participation of potential employers.

#### **OBJECTIVES OF THE CDBPD FOR 2020:**

- Expanding the areas of collaboration with potential employers (training centres, corporate master's programmes, personal scholarships, competitions, etc.).
- Increasing control over the employment of graduates who completed employer-sponsored training.
- Participating in the creation of the Atlas of Industrial Tourism of the Voronezh Region and its active application.
- Creating graduate databases (surveys among students and collecting data for Infosys, registration on the alumni website and Stazhirovka.ru and HeadHunter web portals).
- Monitoring and conducting surveys among employers, analysing the demand for specialists who completed secondary vocational education programmes.



## **5.18. TELECOMMUNICATIONS AND INFORMATION SYSTEM DEVELOPMENT AT VSU IN 2019**

### **DEVELOPMENT OF THE UNIVERSITY'S TELECOMMUNICATION SYSTEM**

The University fibre-optics network connects all the buildings and most of the residence halls. Thanks to the modern communications equipment, the data transfer rate is now up to 10 Gbit/s.

VSU's wireless network covers almost all the University territory. The wireless network has 210 Wi-Fi access points. In 2019, the wireless network coverage was extended in university building No. 9 and the canteen of the main building.

The telephone network of the university continues to be upgraded. In the reporting year, the total number of IP phones used increased by 8% and amounted to 388. Now the total number of IP phones is comparable with the number of devices connected to the urban telephone network, which will definitely encourage further optimisation of the telephone network and the financial costs of its maintenance.

In 2019, the main activities of the university in this sphere were aimed at increasing the stability of the network and services and optimising the work efforts put in the process of monitoring and maintaining the communication equipment.

### **DEVELOPMENT AND SUPPORT OF THE UNIVERSITY WEBSITES**

In 2019, the number of information publication requests on the VSU website ([www.vsu.ru](http://www.vsu.ru)) amounted to 1864, including 978 news articles and 169 announcements.

The analysis of statistics shows that in 2019 the number of page views on the official website of the university increased by 135 thousand as compared to the previous year, while the number of document downloads increased by approximately 120 thousand.

Geographical distribution of the website visitors includes 176 countries. Users from the following countries showed an increased interest to the website: Turkmenistan (5 times more page views as compared to the previous year), Canada (almost 2 times more), Greece (2 times more), Azerbaijan, and Norway (for the first time).

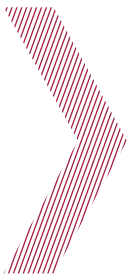


Figure 5.11

OFFICIAL VSU WEBSITE TRAFFIC STATISTICS IN 2019

**Annual report for the official VSU website traffic statistics from 01.01.2019 to 01.01.2020**

**NUMBER OF VIEWS**



**1,376,271** page views (135 thousand more as compared to the previous year), 60% of the visitors continued looking through the site after viewing the homepage



**3,537,409** page views



**223,515** document downloads (*pdf, ppt, doc, etc.*)



**3 minutes 30 seconds** was the average time spent on the website

Figure 5.12

TRAFFIC SOURCE OF VSU WEBSITE

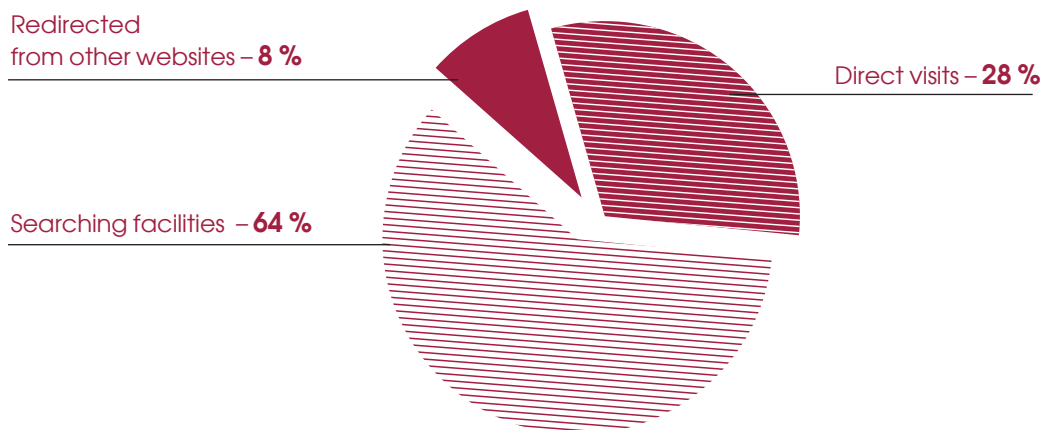




Figure 5.13

### VISITS TO THE OFFICIAL VSU WEBSITE BY CONTINENTS

**Europe – 1,270,664 visits**

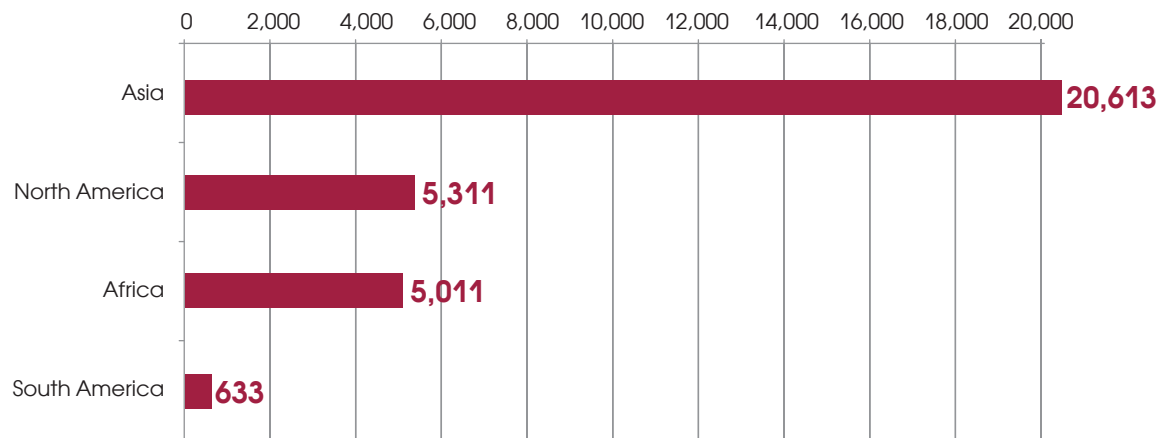


Figure 5.14

### VISITS TO THE OFFICIAL VSU WEBSITE BY COUNTRIES

**Russia – 1,237,704 visits**

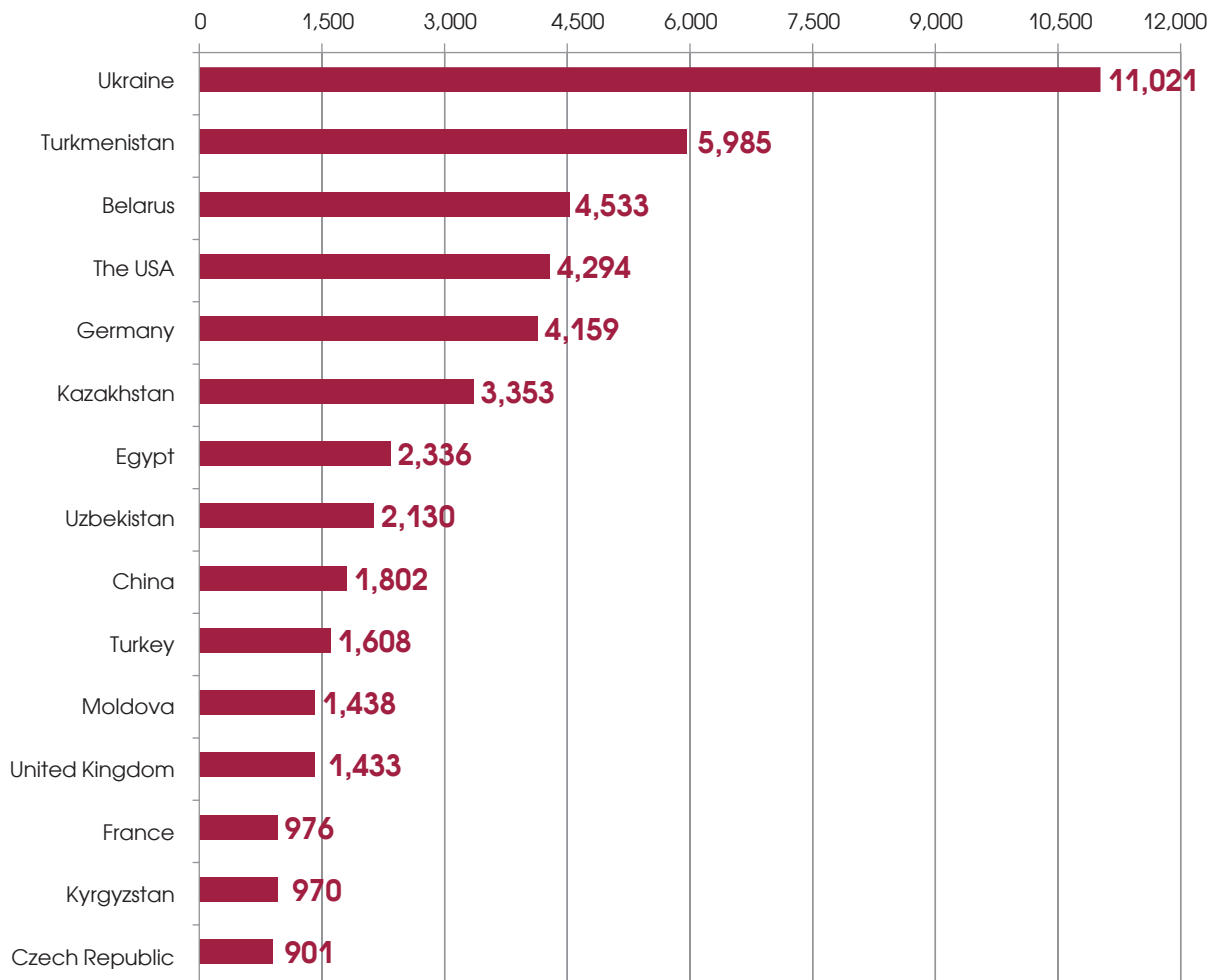




Figure 5.15

TOP VIEWS ON THE INTERNATIONAL VERSIONS OF THE WEBSITE

**Russian – 2,119,958 visits**

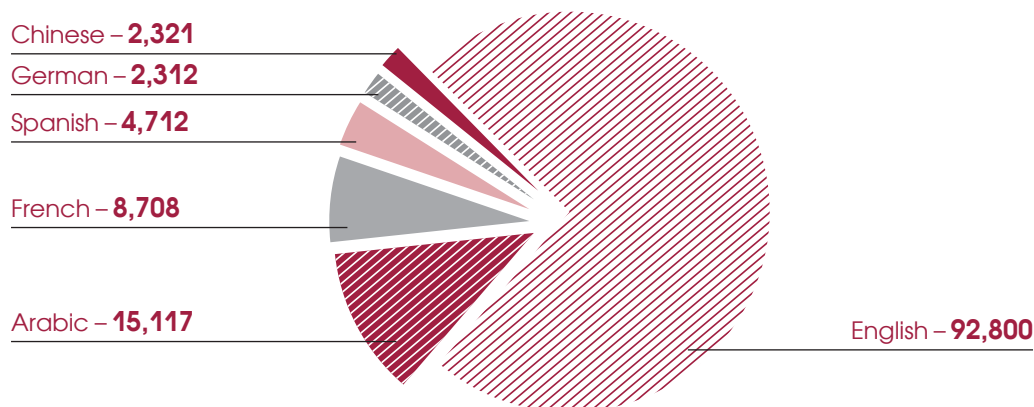


Table 5.14

TOP SECTIONS

Top sections	Visits
University	1,024,930
Academic Staff	568,541
News	391,596
Questions to the Rector	67,015
Announcements	25,370
Calendar of events	14,952
Articles	9,100
Anti-corruption	4,659
Figure of the week	1,482

Table 5.15

TOP PAGES

Top pages	Visits
Faculties	135,072
Postgraduate Training Programmes	53,509
Faculty of Economics	42,514
Faculty of Biomedical Sciences	37,065
Faculty of Law	32,788
Faculty of International Relations	31,081
Faculty of Romance and Germanic Philology	30,308
Faculty of Computer Sciences	29,947
Faculty Of Military Education	26,918
Faculty of Journalism	23,977



## ENGLISH VERSION OF THE OFFICIAL VSU WEBSITE

Geographical distribution of the website visitors includes 169 countries. Users from the following countries showed an increased interest in the website: Morocco (almost 2 times more visits), Turkmenistan, Indonesia, and Japan (for the first time).

275 news articles were published in the reporting year.

Figure 5.16

## TRAFFIC ON THE ENGLISH VERSION OF THE OFFICIAL VSU WEBSITE IN 2019

### Annual report for the official VSU website traffic statistics from 01.01.2019 to 01.01.2020

#### NUMBER OF VIEWS



**25,345** visits

**53%** of the visitors continued looking through the site after viewing the homepage



**92,812** page views



**3,216** document downloads (pdf, ppt, doc, etc.)



**3 minutes 12 seconds** was the average time spent on the website

Figure 5.17

## TRAFFIC SOURCE ON THE ENGLISH VERSION OF VSU WEBSITE

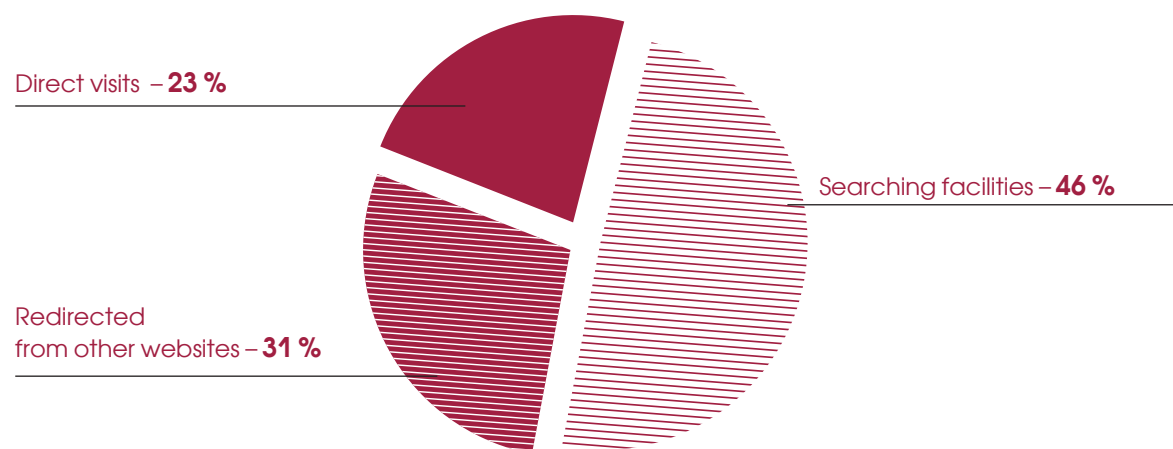






Figure 5.18

VISITS TO THE ENGLISH VERSION OF THE WEBSITE BY CONTINENTS

Europe – 12,688 visits

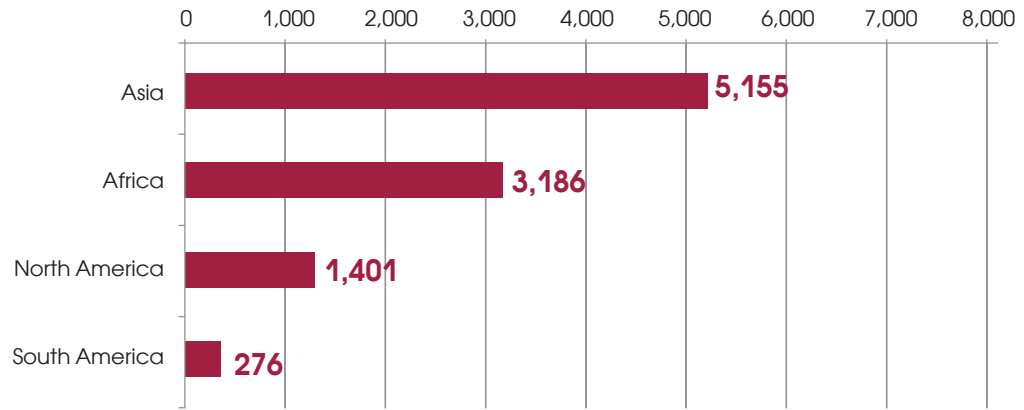


Figure 5.19

VISITS TO THE ENGLISH VERSION OF THE WEBSITE BY COUNTRIES

Russia – 8323 visits

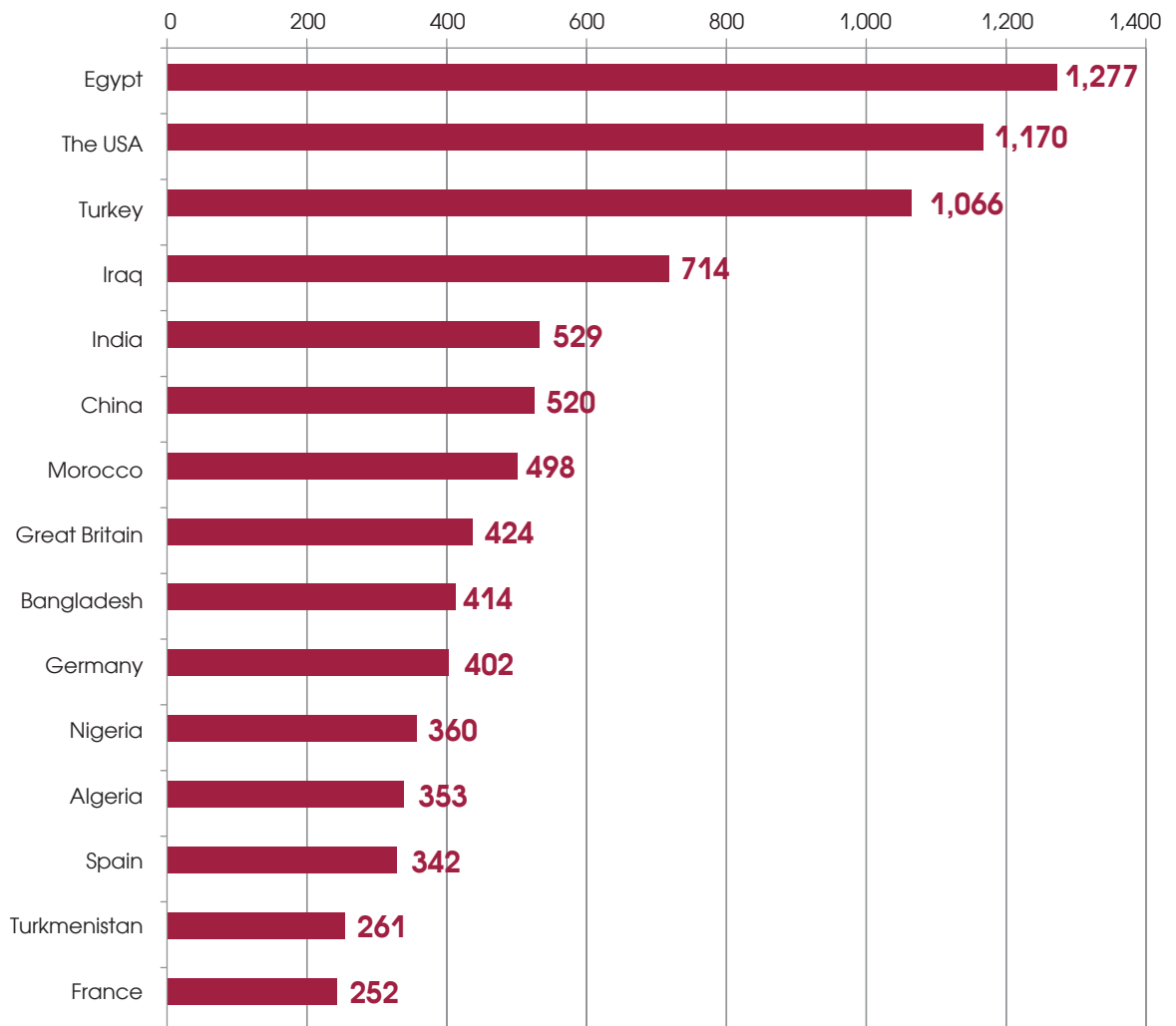




Figure 5.20

TOP FOREIGN LANGUAGES

English – 11,805 visits

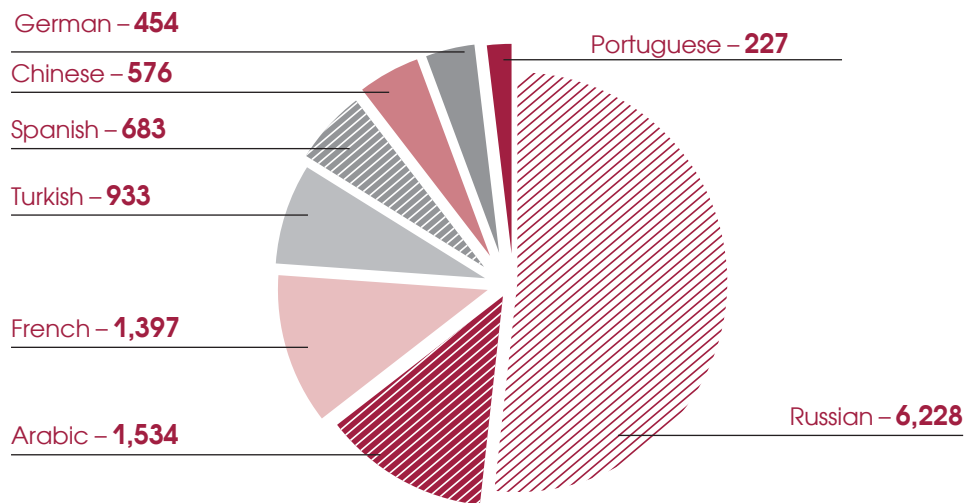


Table 5.16

TOP SECTIONS ON THE ENGLISH VERSION OF THE WEBSITE

Top sections	Visits
Training	31,627
Faculty	19,060
About VSU	13,846
News	4,374
Research	1,819
Cooperation	1,794
Video	146

## DEVELOPMENT OF THE UNIVERSITY MULTIMEDIA EQUIPMENT

A project for a multimedia system in the White Hall of the VSU History Museum was designed in the reporting year. According to the project, the hall is to be equipped with unique equipment for discussions that allows broadcasting presentations, recording videos of the events held in the hall, taking part in video conferences, and connecting to the Internet. As of the end of the reporting year, procurement procedures for mounting and commissioning works were being held.

Figure 5.21

### DESIGN CONCEPT OF THE WHITE HALL EQUIPPED WITH A MULTIMEDIA SYSTEM



## TECHNICAL AND METHODOLOGICAL SUPPORT FOR THE PROCESS OF CREATION OF MASSIVE OPEN ONLINE COURSES

The following tasks were completed in the reporting year in the process of creating the environment for massive open online courses (MOOC):

- The Department of E-learning and Distance Learning Technologies was established within the VSU Information Technology Administration.
- The premises for filming video lectures were found; studio equipment for filming, recording, and editing was purchased and commissioned.
- A web portal for uploading and publishing MOOCs was created (<https://mooc.vsu.ru> based on the LMS platform Moodle).
- 17 lecturers and 2 employees of the Information Technology Administration completed the professional retraining programme on the use of the programmes related to the creation and application of MOOCs in the educational process.



- 8 MOOCs were completed and are now being tested by VSU students, another 5 courses are being developed.
- Connection to the “Modern electronic education environment in the Russian Federation” resource will soon be established, the agreement on the integration has been signed, and final adjustments of the mooc.vsu.ru portal are being made.

Figure 5.22

## STUDIO FOR FILMING VIDEO LECTURES



Figure 5.23

## INTERFACE OF THE PORTAL FOR UPLOADING AND PUBLISHING VSU MOOCs

Современные химические источники тока

Библиотека  
Всем гарантируем успех  
ВСУ  
Всегда в движении

Личный кабинет » Мои курсы » СХИТ » Тема 1. Электрохимическое преобразование энергии » Конспект видеолекции 1.1

**НАВИГАЦИЯ**

- Личный кабинет
- Главная страница
- Страницы сайта
- Мои курсы
  - Безопасный Интернет
  - СХИТ
    - Участники
    - Значки
    - Компетенции
    - Оценки
    - Введение
    - Тема 1. Электрохимическое преобразование энергии
      - 1.1. Видеолекция. Основные типы химических источни...
- Конспект видеолекции

**Конспект видеолекции 1.1**

**1.1. Основные типы химических источников тока. Электрохимический элемент**

Химический источник тока – устройство, которое напрямую преобразует химическую энергию веществ (окислителя и восстановителя) в электрическую энергию. В иных энергоконверсионных установках, например, на тепловых электростанциях сгорающее топливо преобразуется в тепловую энергию, которая затем превращается в механическую энергию в паровой турбине, связанной с генератором, вырабатывающим электрический ток. В химических источниках тока этот многоэтапный процесс заменяется единственным этапом электрохимической энергоконверсии (рис. 1.1).

```
graph TD
    A[ХИМИЧЕСКАЯ ЭНЕРГИЯ ТОПЛИВА И ОКИСЛИТЕЛЯ] --> B[Камера сгорания]
    B --> C[ТЕПЛОТА]
    C --> D[Паровая турбина]
    E[ХИМИЧЕСКИЙ ИСТОЧНИК ТОКА] --> F[ЭЛЕКТРИЧЕСКАЯ ЭНЕРГИЯ]
```

Настройка

## MEASURES AIMED AT AUTOMATION OF THE EDUCATIONAL PROCESS

### DEVELOPMENT OF ELECTRONIC TIMETABLE

In the reporting year, the system for the automation of the VSU timetable became more convenient and reliable. In particular, a special module was designed that can be posted on any website and allows tracking the changes introduced by the supervisor online via the faculty's website. The timetable can also be viewed online by the faculty's study groups or by lecturers; the online status of the current class is displayed taking into account whether it is an odd or even week.

Figure 5.24

### INTERFACE OF THE ONLINE VIEWING MODULE OF THE TIMETABLE

The screenshot displays the online viewing module of the timetable interface. The interface is in Russian and shows a navigation menu on the left, a main content area with a search filter, and a large table of the timetable on the right. The navigation menu includes options like 'РАСПИСАНИЕ', 'ПЕРЕВОД СТУДЕНТОВ НА ВАКАНТНЫЕ БЮДЖЕТНЫЕ МЕСТА', and 'СПРАВОЧНИК СТУДЕНТА'. The main content area has a search filter for 'Расписание по группе' with a dropdown menu showing 'спец.итал' and other options. The timetable table has columns for the day of the week, time slots, and class details including course names and lecturers.

День	Время	Наименование занятия	Преподаватель
Понедельник	08:00-09:35		
	09:45-11:20		
	11:30-13:05	Физическая культура и спорт (гр) Спортзал Чернышев В. А.	
	13:25-15:00	История и культура стран изучаемого языка (лек) а.47 Побегайло И. В.	
	15:10-16:45	Практический курс первого иностранного языка (гр) а.84 Закутская Н. Г.	
	16:55-18:30		
	18:40-20:00	Практический курс первого иностранного языка (гр) а.84 Закутская Н. Г.	
	20:10-21:30		
	08:00-09:35		
	09:45-11:20		
Вторник	11:30-13:05		
	13:25-15:00	Лексико-грамматический практикум (гр) а.84 Закутская Н. Г.	
	15:10-16:45	Практический курс первого иностранного языка (гр) а.84 Закутская Н. Г.	
	16:55-18:30	Теория перевода (гр) а.84 Закутская Н. Г.	
	18:40-20:00	Лексико-грамматический практикум (гр) а.84 Закутская Н. Г.	
	20:10-21:30		
	08:00-09:35	Практический курс второго иностранного языка (гр) а.101 Зубков И. Н.	
	09:45-11:20	Практический курс второго иностранного языка (гр) а.84 Зубков И. Н.	
	11:30-13:05	Физическая культура и спорт (гр) Спортзал Чернышев В. А.	
	13:25-15:00	Теория перевода (лек) а.84 Закутская Н. Г.	
Среда	15:10-16:45	Специальный курс итальянского языка (гр) а.84 Закутская Н. Г.	
	16:55-18:30		
	18:40-20:00		
	20:10-21:30		
	08:00-09:35		
	09:45-11:20	Практический курс второго иностранного языка (гр) а.12 Зубков И. Н.	
	11:30-13:05	Практический курс второго иностранного языка (гр) а.84 Зубков И. Н.	
	13:25-15:00	История и культура стран изучаемого языка (гр) а.47 Побегайло И. В.	
	15:10-16:45	Практический курс первого иностранного языка (гр) а.84 Закутская Н. Г.	
	16:55-18:30	Специальный курс итальянского языка (гр) а.84 Закутская Н. Г.	
Четверг	18:40-20:00		
	20:10-21:30		
	08:00-09:35		
	09:45-11:20	Философия (лек) а.100 Костюк А. А.	
	11:30-13:05	Философия (гр) а.28 Костюк А. А.	
	13:25-15:00	Лексикология (лек) а.47 Петрова Е. В.	
	15:10-16:45	Лексикология (гр) а.47 Петрова Е. В.	
	16:55-18:30	Практический курс второго иностранного языка (гр) а.91 Махонина А. А.	
	18:40-20:00	Практический курс второго иностранного языка (гр) а.91 Махонина А. А.	
	20:10-21:30		

As a result of testing and being launched, the module is being successfully used at the Faculty of Romance and Germanic Philology and the Faculty of Economics.



## DEVELOPMENT AND SUPPORT OF THE HARDWARE-SOFTWARE PLATFORM OF THE ELECTRONIC EDUCATION AND INFORMATION SYSTEM OF THE UNIVERSITY

In the reporting year, a number of procedures were developed to upgrade the hardware-software platform of the electronic education and information system of the university:

- Preparatory technical measures were taken for the transition to the educational standards of generation 3++ for higher education and generation 4 for secondary vocational education, including the possibility of storing and presenting the structure of competencies, indicators of their mastering, and professional standards for curricula of the new generation 3++.
- A mechanism for automated diploma and diploma supplement layout for graduates of residential educational programmes was implemented.
- A mechanism for determining the amount of academic scholarships based on the academic performance of the students of residential educational programmes was implemented.
- A mechanism for issuing academic certificates was implemented for the programmes of higher education and secondary vocational education.
- Orders for the graduation of students from the Borisoglebsk branch of VSU can now be formed.
- The academic load of individual lecturers can now be distributed using the distribution results of the previous stages.
- It is now possible to record the number of students on the further professional education programmes preparing foreign citizens and stateless individuals for professional educational programmes in the Russian language (International Education Institute).
- Information can be uploaded to the "Admission campaign monitoring" section of the information and analysis system of the Ministry of Education and Science of the Russian Federation.
- The database of the VSU access control system can be extended with information on first-year students, including the mifare codes of students' campus cards.

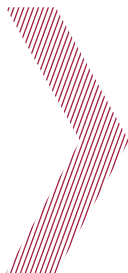
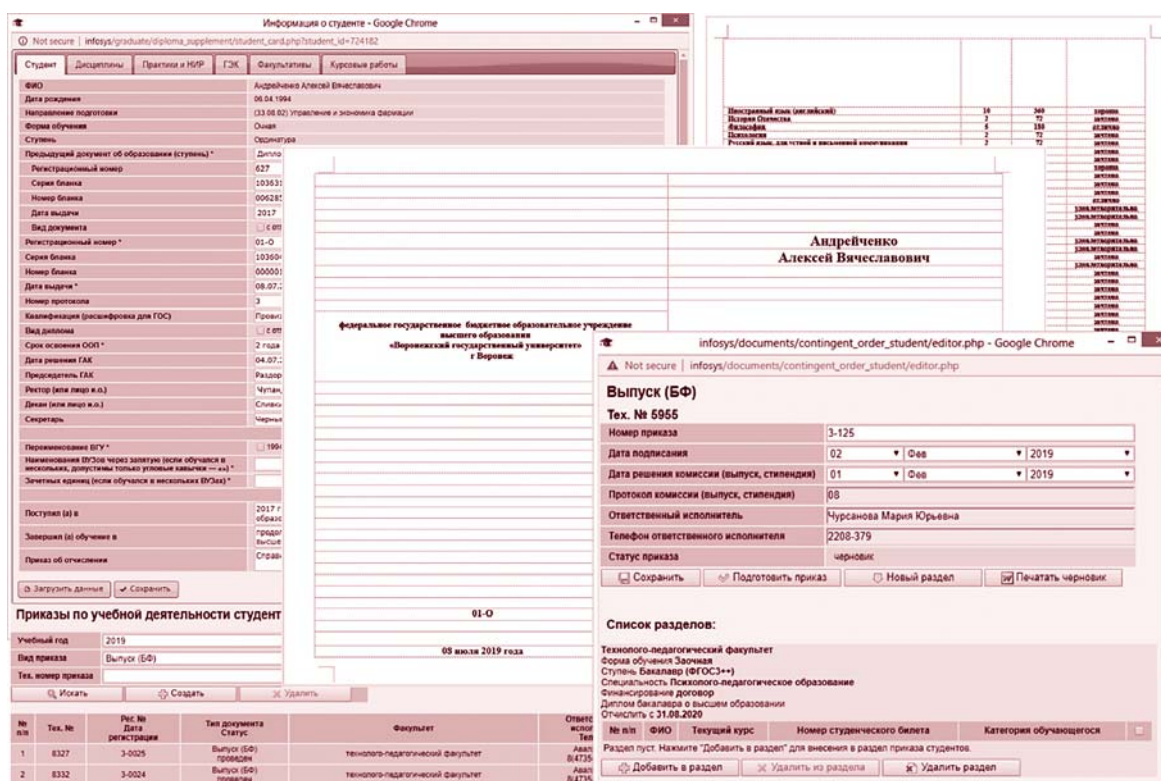


Figure 5.25

INTERFACES OF THE IMPLEMENTED MODULES IN THE INTEGRATED INFORMATION SYSTEM OF VSU



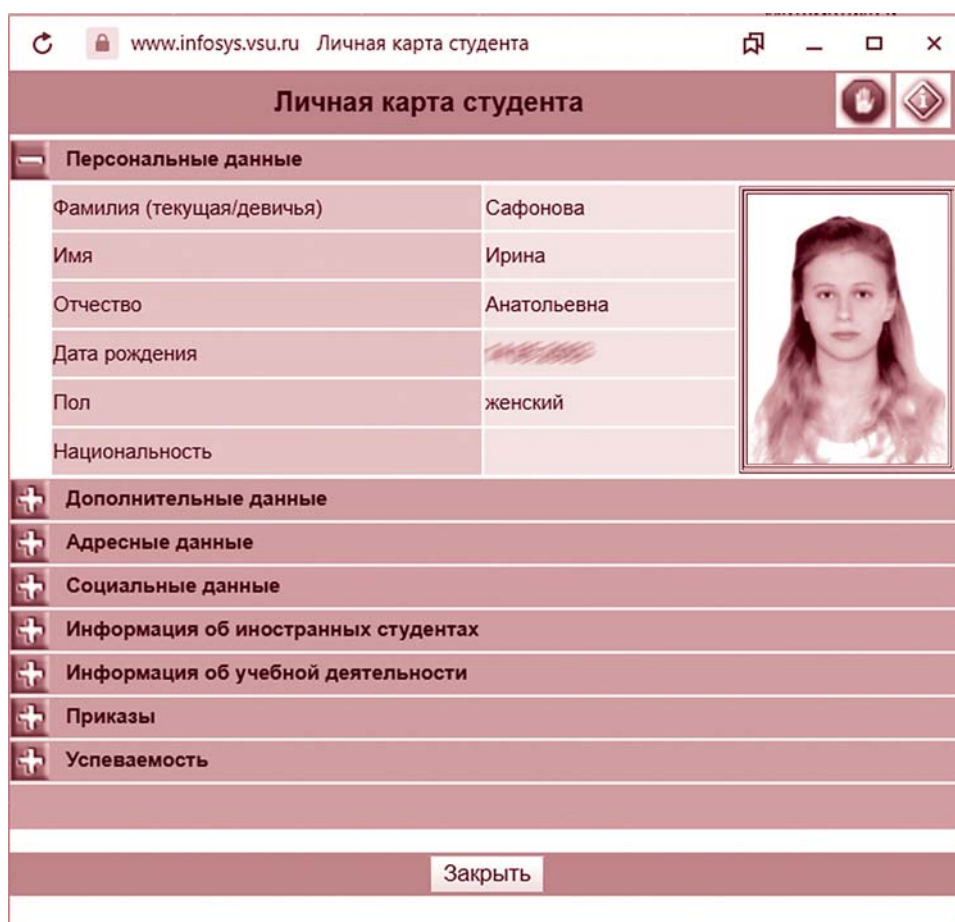
CREATING A PHOTO ARCHIVE OF STUDENTS

To simplify the procedure of identification for students, a photo archive with the photographs from personal files of the first-year students enrolled in 2019 was created in the reporting year. The personnel of the dean’s offices can find these photos in the electronic personal cards of the students in the Integrated Information System of VSU (www.infosys.vsu.ru). The photos can be used for identification via the access control system when going through a turnstile or for the issuance of campus cards.

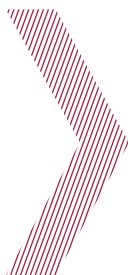


Figure 5.26

“PERSONAL STUDENT’S CARD” INTERFACE  
IN THE INTEGRATED INFORMATION SYSTEM OF VSU







## “DIGITAL HERBARIUM OF VSU”

In the reporting year, the Faculty of Biomedical Sciences project “Digital Herbarium of VSU” was implemented using the equipment of the data processing centre of the university. A part of the unique herbarium collection named after Professor B.M. Kozopolynsky was digitised. The total size of the herbarium collection is 90,000 items, some of which have been stored since 1822. The collection is registered in the international database The Index Herbariorum. It is the biggest and most important world-class collection in Russia and is considered a national treasure of our country.

The digital herbarium is published online ([herbarium.bio.vsu.ru](http://herbarium.bio.vsu.ru)) and is used as electronic teaching material in classes at the following educational programmes: 06.03.01 – Biology, 06.03.02 – Soil science, 33.02.01 – Pharmacy, 30.05.03 – Medical cybernetics, 30.05.01 – Medical biochemistry. The electronic data from the herbarium collection can also be used for graduate qualification papers of bachelor students as well as master’s, PhD, and doctoral dissertations.

Figure 5.27

## INTERFACE OF THE “DIGITAL HERBARIUM OF VSU” SYSTEM





## TECHNICAL SUPPORT OF USERS OF VSU'S TELECOMMUNICATION SERVICES

In the reporting year, the technical support of users within the university's telecommunication services was performed by VSU's Information Technology department. 13,694 user requests, both technical and informational, were processed. In 2018 this figure was 12,538. The proportion of successfully resolved problems was 97.5%.

Figure 5.28

### NUMBER OF REQUESTS FROM 2012 TO 2019

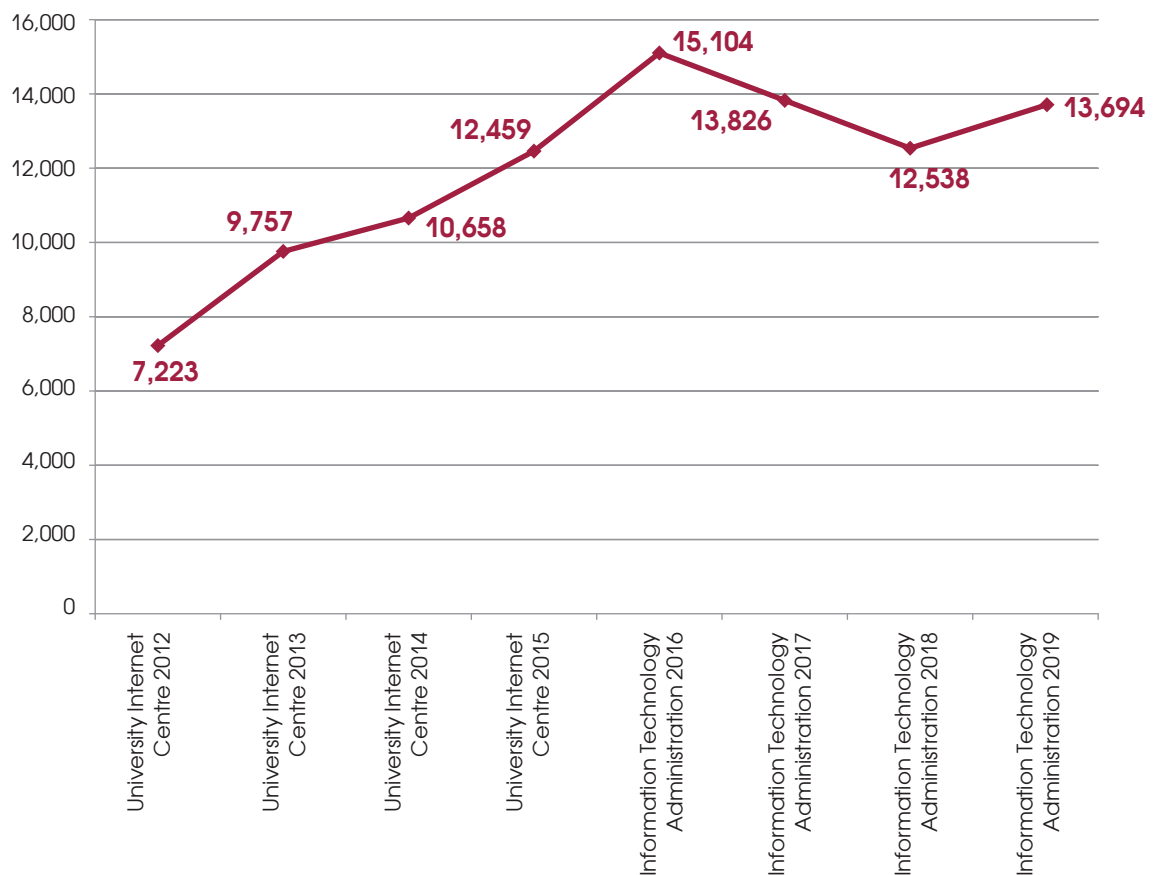


Figure 5.29

DISTRIBUTION OF THE NUMBER OF REQUESTS BY MONTHS IN 2019

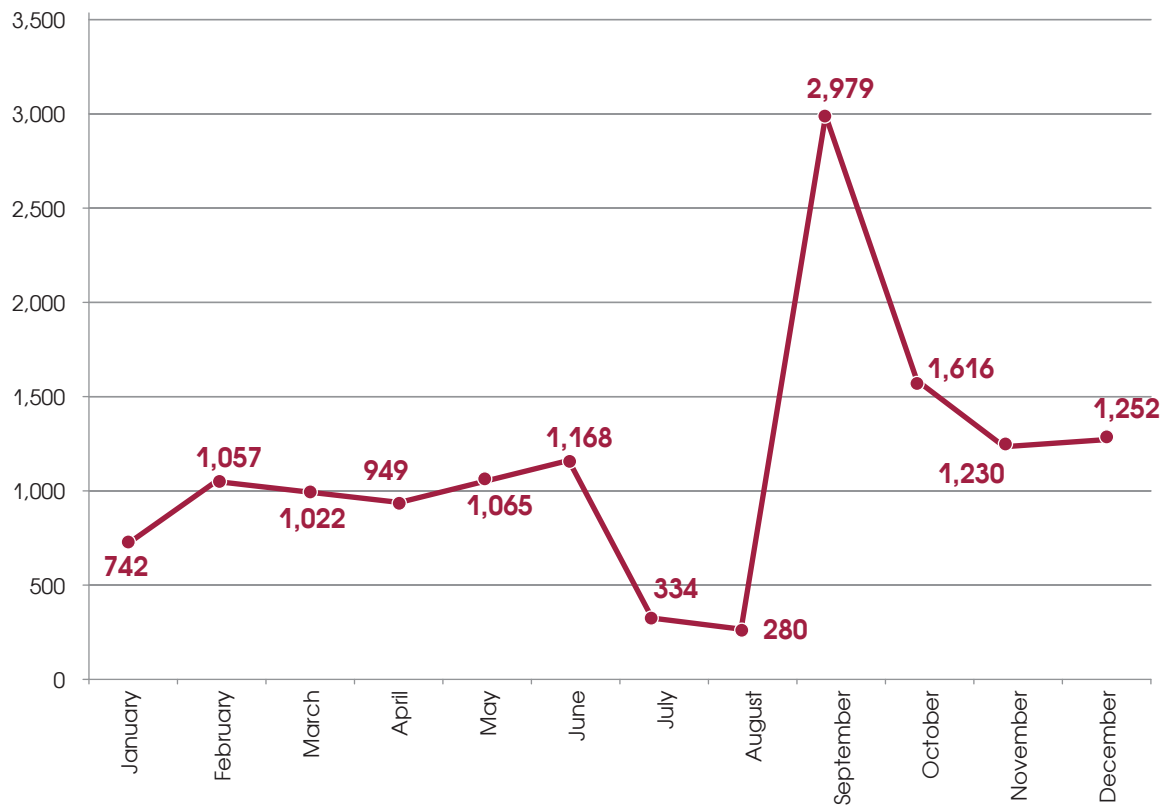
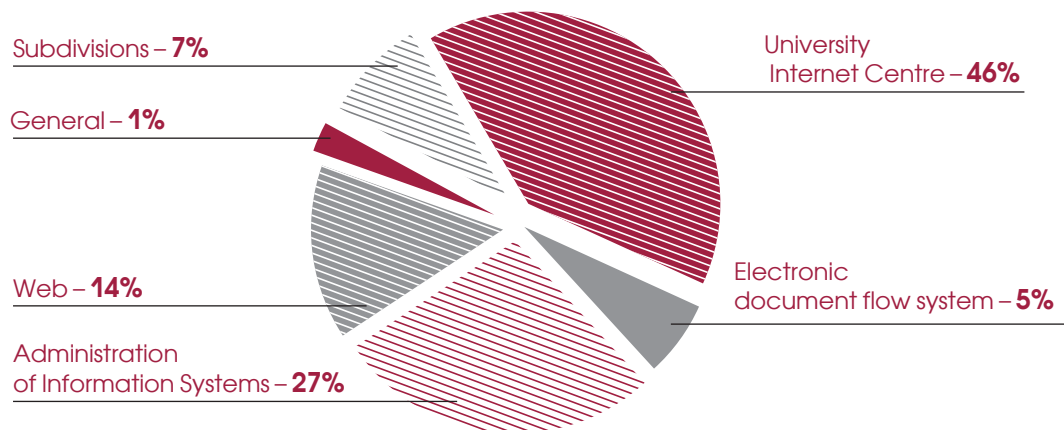


Figure 5.30

DISTRIBUTION OF THE NUMBER OF REQUESTS BY MONTHS IN 2019



Most of the requests (38%) were related to the registration of students and staff in the university wireless network and fixing telecommunication services issues. VSU information systems requests were the second most popular requests (26%). And finally, requests related to posting information on websites were third (14%).



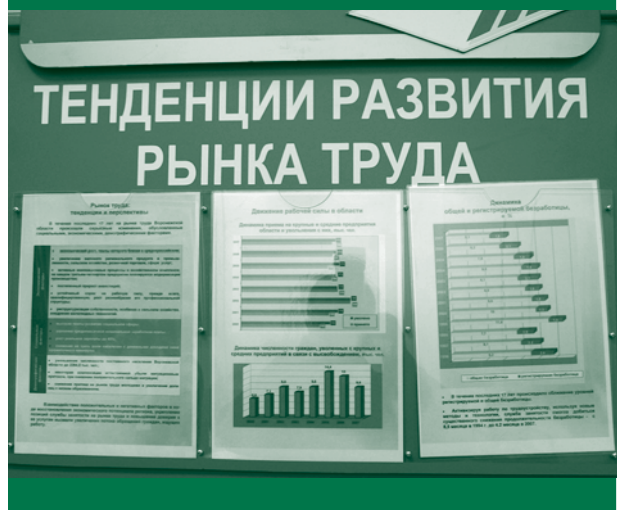
## 5.19. BRIEF SUMMARY OF THE MAIN ACHIEVEMENTS IN 2019

- In the area of mathematics, a theorem was developed for the existence of solutions to the problem of non-linear waves of a specified kind on the ocean's surface covered with ice; an analogue of the Liouville theorem was proved for axisymmetrical flows of elastic fluid (steady-state Navier-Stokes equations) with rotation; the general structure of the trajectory and global attractors of evolutionary equations with memory was described; theorems were made regarding the existence of a minimal trajectory pullback attractor and a global pullback attractor both for weak solutions of the nonautonomous medium with memory and or weak solutions of the Bingham medium movement model in a nonautonomous case. Theorems were developed regarding the existence of weak solutions for the Leray, Navier-Stokes, and Voigt alpha-models with viscosity coefficients depending on temperature. A theory was created regarding the non-local stabilisation of a hydrodynamic system. A structure of stabilising impulse control for the differentiated Burgers' equation was presented. A theorem was deduced for the spectrum of an emerging operator sheaf for the system of integro-differential equations. These equations describe the motion of a viscoelastic body fixed on the border of limited regions. Solutions to a number of inverse problems of structure reproduction of non-linear packets of internal waves were obtained. The temperature field and layer boundaries were restored when passing through the subsurface of a solitary wave and a tidal bore. Theorems of the existence and uniqueness of a strong solution of the initial boundary value problem were established for a system of equations of non-linear viscoelastic fluid motion which is a fractional analogue of the Voigt's viscoelastic model with memory along the spatial variable in the flat case (Head researcher – Professor V. G. Zvyagin).

New functional characteristics for Banachian limits and their application to specific problems of functional analysis were obtained (Head researcher – Professor E. M. Semenov).

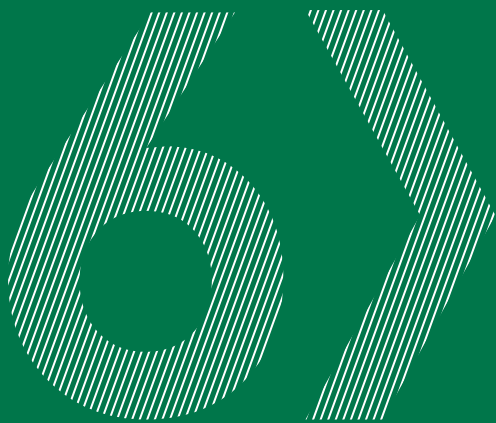
- In the area of optics and spectroscopy, a technology was developed for increasing the sensitivity of silicon in the spectral range of 1.2–2.0  $\mu\text{m}$  due to deposition of colloid quantum dots Ag<sub>2</sub>S passivated using thioglycolic acid on the surface of silicon (Head researcher – Professor O.V. Ovchinniov).
- In the area of laser physics, a method of attosecond pulse regeneration was developed using the analysis of the high harmonics spectra in the infrared and vacuum ultraviolet impulses. A theory for the generation of the high harmonics was developed in the intensive infra-red and weak (perturbative) vacuum ultraviolet impulses (Head researcher – Associate Professor M.V. Frolov).
- In the area of atomic and molecular physics, theories of non-linear mechanism of interaction between laser radiation and polyatomic molecules were developed. This mechanism is associated with the change in the geometry of molecules in a strong laser field, instability of liquid metal in the outer electric field during laser ablation, and formation of metal nanoparticles of the specified sizes (Head researcher – Professor B.A. Zon).
- In the area of solid-state physics, a method was developed for the control of temperature interval of the existence of a ferroelectric phase in ferroelectric nanocomposite materials based on porous glass and materials of the potassium dihydrogen phosphate group (Head researcher – Professor A.S. Sidorkin).

- In the area of physical chemistry, new metal-ion exchanger polymer nanocomposites with high capacity and monoporosity were obtained, a nanocomposite unit was created, and a technology of deep and continuous deoxygenation of pure water in closed-loop and open-loop systems was developed based on the unit (Head researcher – Professor T.A. Kravchenko).
- In the area of inorganic chemistry, a method of creating thin gas-sensitive films on the surface of GaAs, including its thermal oxidation, was developed. The obtained films have a sensor signal for the presence of CO in the atmosphere with the concentration of 80–120 ppm, and they can be used for creation of semiconductor gas sensors (Head researcher – Professor I. Ya. Mittova).
- In the area of organic and physical chemistry, samples of new polyfunctional derivatives of amine and mercapto-1,2,4-triazoles were created that are used for prevention of copper and brass corrosion as well as reduction of scale formation in heat-exchange equipment in order to preserve the effective process of heat exchange (Head researcher – Professor Kh. S. Shikhaliev).
- In the area of physical chemistry, a theory of liquid and gas adsorption of monomer molecules on different sorbents with the formation of clusters of sorbate of different dimensions and a model of adsorption of amino acids on carbon nanotubes were developed (Head researcher – Professor E. V. Butyrskaya).
- In the area of biophysics, a method of immobilisation of proteolytic enzymes on the matrix of biodegradable polysaccharides was developed. It allows implementing the targeted delivery of antibacterial enzyme preparations, which are effective in the treatment of suppurative complications, especially if they are caused by the formation of a bacterial biofilm with antibiotic resistant strains on the surface of a wound or burn (Head researcher – Professor – V.G. Artyukhov).
- In the area of medicine and healthcare, a technology for creating a biomimetic bonding “dental material – human dental hard tissue” was developed based on nanocrystalline calcium hydroxyapatite obtained from a biogenic source of calcium and a complex of basic polar amino acids corresponding to the organo-mineral complex of human teeth (Head researcher – Professor P. V. Seredin).
- In the area of environmental protection and human ecology, an electronic medical and environmental atlas of Voronezh was created. It includes the sections dedicated to the environmental background, public health and assessment of environmental risks associated with microclimate and technogenic pollution in cities (Head researcher – Professor S. A. Kurolap).
- In the area of ecological toxicology, a method for the reduction of the toxic action of mitochondrial-directed pesticides for insect-pollinators both during and after pesticide application was developed. It is based on the addition of methylene blue to a sugar syrup (Head researcher – Professor V. N. Popov).
- In the area of information theory and artificial intelligence, methods and algorithms were developed for image superresolution architecture under applicative noise. They can be used in the systems of aerospace monitoring and surveillance (Head researcher – Professor A. A. Sirota).
- In the area of optics and supporting technological tools for information processes, scientific evidence was provided for the methods of obtaining and processing of multi-spectral information obtained during the analysis of an even flow of elements of grain mixture. New methods of express analysis, based on the integration of complex spectrum analysis and machine learning algorithms, were developed for their classification in the flow mode in order to control the varietal purity of wheat and to detect the elements affected by various fungal pathologies (Head researcher – Professor A. A. Sirota).





## **ECONOMICS AND CONTRACT SERVICE**





## ECONOMICS AND CONTRACT SERVICE



**L.S. Korobeinikova,**

Vice-Rector for Economics  
and Contract Services

### 6.1. VSU MAJOR OBJECTIVES IN THE SPHERE OF ECONOMICS AND FINANCE IN 2019

The goal of Voronezh State University in terms of economics and contract services is to achieve the best results of the university's financial policy, in accordance with the current legislation in regarding financial management of the universities subordinate to the Ministry of Science and Higher Education of the Russian Federation.

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

- To change the payment system for academic staff members within the effective contract by moving from lump sum payments to established monthly increments.
- To adjust the salary of academic staff members to the corresponding values set by the roadmap for 2019,
- To continue of the tradition of bonuses for all categories of employees,
- To optimize costs in accordance with the university's strategy of finance management, budgeting, and planning, maintaining the current level of financial solvency and financial stability of the university,
- To achieve the optimum total financing of products, works, and services to provide for the university's needs,
- To reduce the number of changes in the provisions of the time-schedule for purchases of goods, works, and services to improve the quality of planning the university's purchasing activities,





- To reduce liabilities to creditors,
- To achieve a positive financial result from the university's operating activities,
- To improve the purchasing competence of contractual system specialists in the accounting management of budget institution and as part of the programme "Purchase Management in the Contractual System".

## 6.2. REVENUE STRUCTURE BY THE SOURCE OF FINANCING IN 2019<sup>Δ</sup>

In 2019, the total revenue amounted to **2,823,704.1 thousand roubles**, including:

- Government order subsidies - **1,144,083.5 thousand roubles**,
- Targeted subsidies - **363,999.4 thousand roubles**,
- Receipts from the provision of services to natural and legal persons on a fee-paying basis - **1,315,621.2 thousand roubles**. (Table 6.1, Figure 6.1).

Table 6.1

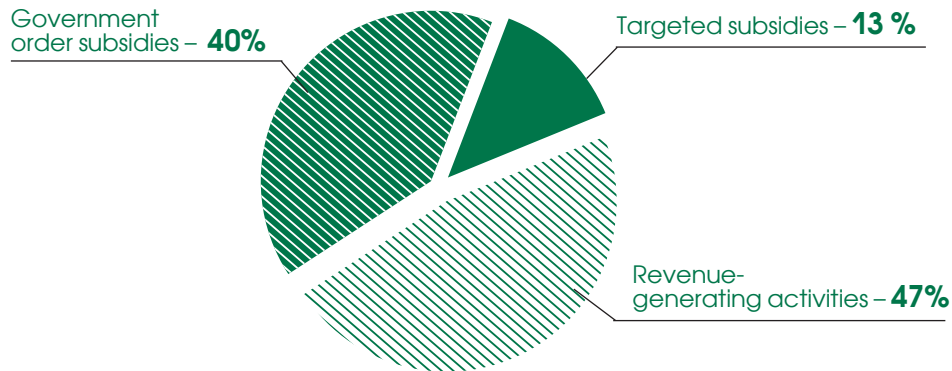
REVENUE STRUCTURE BY THE SOURCE OF FINANCING,  
thousand roubles

Cash received in 2019		Total
Federal budget	Revenue-generating activities	
1,508,082.9	1,315,621.2	<b>2,823,704.1</b>



Figure 6.1

### REVENUE STRUCTURE BY THE SOURCE OF FINANCING



In 2019, the percentage of revenue from the federal budget amounted to 53% and 47% was from revenue-generating activities.

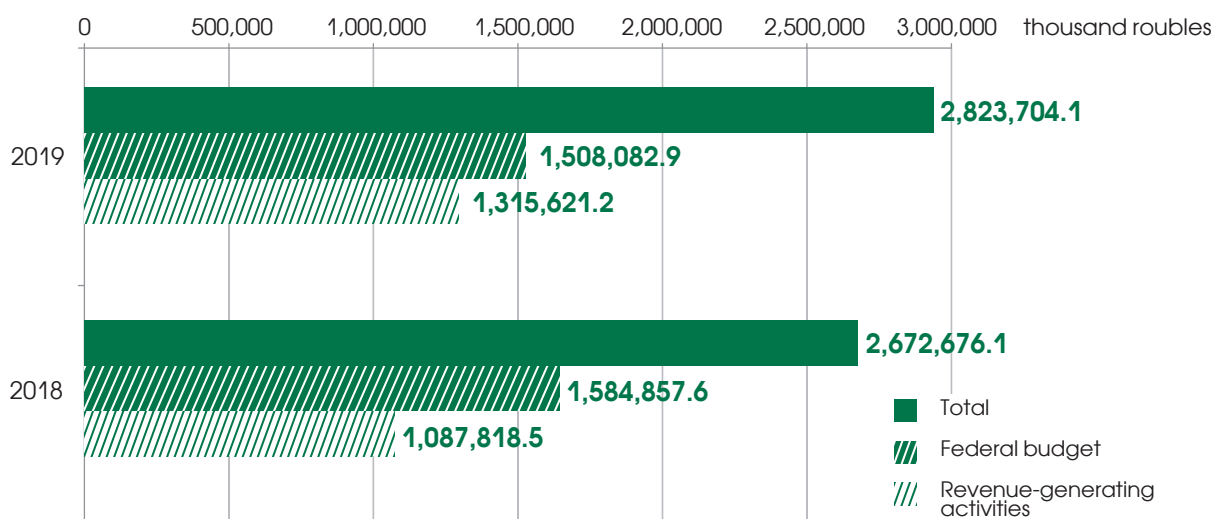
### 6.3. REVENUE IN 2019 COMPARED TO 2018 BY SOURCES OF FINANCING

Compared to 2018, the total revenue in 2019 increased by **151,028.0 thousand roubles** (or by 14.9%):

- Subsidies obtained from the Russian Federation state budgetary resources decreased by 76,774.7 thousand roubles,
- In 2019, extra-budgetary funding from revenue-generating activities increased by 227,802.7 thousand roubles (Figure 6.2).

Figure 6.2

### REVENUE IN 2019 COMPARED TO 2018



## 6.4. AREAS ON WHICH FUNDS WERE SPENT IN 2019 BY SOURCES OF FINANCING

Table 6.2

EXTRACT FROM THE FINANCIAL AND BUSINESS OPERATIONS PLAN OF VORONEZH STATE UNIVERSITY AS AMENDED ON DECEMBER 30, 2019

Name	Total	Governmental order subsidies	Targeted subsidies	Revenue-generating activities
<b>Balance on 01/01/2019</b>	361,186,597.76	138,247,345.41	7,696,256.35	215,242,996.00
<b>Payments for expenses, total:</b>	<b>3,180,687,930.47</b>	<b>1,282,330,845.41</b>	<b>371,104,401.69</b>	<b>1,527,252,683.37</b>
Including payments to personnel	1,610,896,965.64	871,714,091.15	0.00	739,182,874.49
Of them: Staff compensation and staff compensation payment charges	1,560,112,117.93	850,081,085.29	0.00	710,031,032.64
Of them: Salaries of	1,209,150,598.92	656,111,957.77	0.00	553,038,641.15
Academic staff	784,857,142.80	410,465,004.93	0.00	374,392,137.87
Researchers	68,146,933.92	22,692,242.05	0.00	45,454,691.87
Among them: Research staff members	31,916,322.60	11,530,380.53	0.00	20,385,942.07
Other key personnel	0.00	0.00	0.00	0.00
Administrative and managerial personnel	134,342,422.20	76,609,136.19	0.00	57,733,286.01
Support personnel	221,804,100.00	146,345,574.60	0.00	75,458,525.40
Contributions to social insurance funds regarding compensation to employees and other payments to employees of institutions	350,961,519.01	193,969,127.52	0.00	156,992,391.49
Other payments to personnel, excluding salaries	27,656,039.78	2,789,527.93	0.00	24,866,511.85
Other payments, excluding salaries to persons employed to perform specific authorities in accordance with the legislation	7,298,100.00	3,012,770.00	0.00	4,285,330.00
Payments for salaries of personnel working in national security, law enforcement, and defence	15,830,707.93	15,830,707.93	0.00	0.00
Of them: Military compensation and compensation for staff members with special ranks	15,830,557.93	15,830,557.93	0.00	0.00
Social benefits and other payments, total	368,824,647.60	0.00	359,763,072.42	9,061,575.18
Scholarships	368,824,647.60	0.00	359,763,072.42	9,061,575.18
Taxes, commissions, and other payments, total	43,800,750.18	30,352,900.00	0.00	13,447,850.18
Among them: Property and land taxes	40,148,192.99	30,342,900.00	0.00	9,805,292.99
Other taxes and commissions	652,557.19	0.00	0.00	652,557.19
Other payments	3,000,000.00	10,000.00	0.00	2,990,000.00
Other expenses (excluding expenses for purchase of goods, works, and services)	589,894.95	0.00	0.00	589,894.95
Expenses for the purchase of goods, works, and services, total	1,156,575,672.10	380,263,854.26	11,341,329.27	764,970,488.57



End of table 6.2

Name	Total	Governmental order subsidies	Targeted subsidies	Revenue-generating activities
Purchase of goods, works, and services	1,156,575,672.10	380,263,854.26	11,341,329.27	764,970,488.57
Among them: Purchase of other goods, works, and services for state (municipal) needs	1,156,575,672.10	380,263,854.26	11,341,329.27	764,970,488.57
Among them: Design and experimental works	13,730,206.71	0.00	0.00	13,730,206.71
Purchase of goods, works, and services for capital repairs of state property	5,349,501.21	0.10	4,746,829.27	602,671.84
Purchase of other goods, works and services for state (municipal) needs	1,137,495,964.18	380,263,854.16	6,594,500.00	750,637,610.02
Among them: Communications services	22,520,000.00	15,000,000.00	0.00	7,520,000.00
Transport services	2,500,000.00	1,500,000.00	0.00	1,000,000.00
Utility services	252,000,000.00	160,000,000.00	0.00	92,000,000.00
Property rental	840,000.00	100,000.00	0.00	740,000.00
Maintenance works and services	70,076,300.00	45,000,000.00	76,300.00	25,000,000.00
Other works and services	276,811,544.37	43,569,285.42	0.00	233,242,258.95
Fixed asset value increase	93,518,200.00	32,000,000.00	6,518,200.00	55,000,000.00
Increase in material asset value	83,100,000.00	16,100,000.00	0.00	67,000,000.00

In 2019, the largest percentage was accounted for by payments to personnel, which amounted to 51% of the total amount of financing within the financial support of the government order and revenue-generating activities, taking into consideration the fact that in 2019 the process of outsourcing non-core activities was completed. Utility services - 8.0%.

## 6.5. REVENUE BY FACULTY AND THEIR PERCENTAGE OF THE TOTAL REVENUE FOR THE 2018/19 ACADEMIC YEAR

Table 6.3

### REVENUE BY FACULTY AND ITS PERCENTAGE OF THE TOTAL REVENUE FROM EDUCATIONAL ACTIVITIES

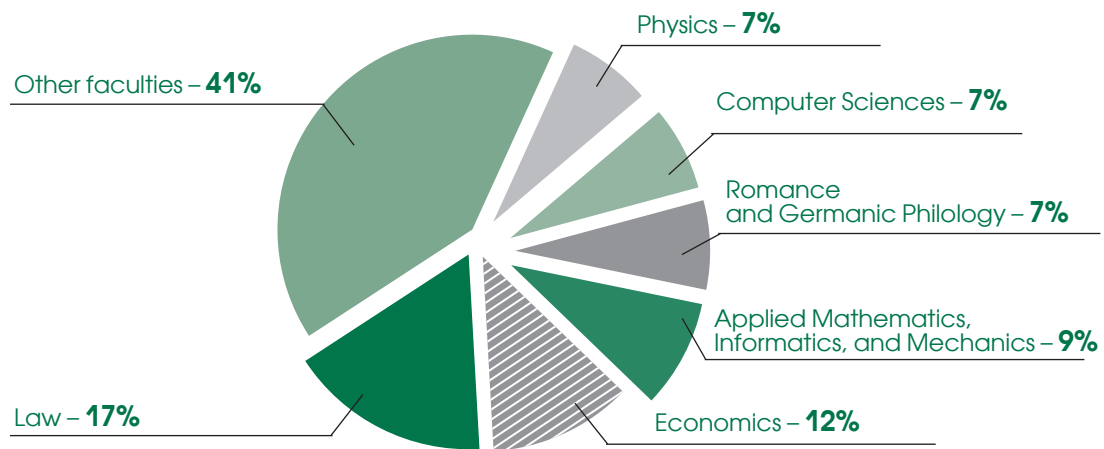
Name	Government orders, rub.	Revenue-generating activities, rub.	Total, rub.	Share of faculty revenue, %	Share of faculty revenue from the total revenue, %
Law	60,381,640	243,143,600	303,525,240	80.1	16.7
Economics	39,900,850	176,762,800	216,663,650	81.6	11.9
Applied Mathematics, Informatics, and Mechanics	130,251,550	33,368,400	163,619,950	20.4	9.0
Computer Sciences	101,791,470	32,287,300	134,078,770	24.1	7.4
Romance and Germanic Philology	32,086,230	95,204,600	127,290,830	74.8	7.0
Physics	120,559,340	6,734,100	127,293,440	5.3	7.0
Biomedical Sciences	89,752,850	18,837,000	108,589,850	17.3	6.0
Journalism	20,415,120	71,217,200	91,632,320	77.7	5.0
Pharmaceutical	29,394,310	55,530,500	84,924,810	65.4	4.7
Mathematics	62,721,120	14,855,600	77,576,720	19.1	4.3
Geology	61,208,400	6,634,500	67,842,900	9.8	3.7
International Relations	10,961,060	55,840,700	66,801,760	83.6	3.6
Geography, Geoecology, and Tourism	49,269,440	11,011,100	60,280,540	18.3	3.3
Chemistry	57,266,990	2,960,400	60,227,390	4.9	3.3
History	23,958,550	24,893,100	48,851,650	51.0	2.7
Philosophy and Psychology	26,669,500	19,358,800	46,028,300	42.1	2.5
Philology	15,370,410	19,683,960	35,054,370	56.2	1.9
<b>Total</b>	<b>931,958,830</b>	<b>888,323,660</b>	<b>1,820,282,490</b>	<b>48.8</b>	<b>100.0</b>

In 2019, the Faculty of Law and the Faculty of Economics as is traditional remain the leaders in the receipt of funds from the main activities of the university: 16.7 and 11.9%, respectively, in the total revenue from educational activities (Figure 6.3).



Figure 6.3

### REVENUE STRUCTURE BY FACULTY IN 2019



## 6.6. PROCUREMENT SERVICE REPORT

In 2019, 1,951 agreements were signed by the procurement service, which is 555 agreements more than in 2018. The sources of financing were the subsidies obtained from the Russian Federation state budget resources, grants, funds provided to fulfil state contracts, as well as funds obtained from individuals and legal entities through other revenue-generating activities.

Under the completed contracts, upon the placement of the orders for purchasing goods, works, and services, the main sources of financing for the purchasing activities were grants, funds provided to fulfil contracts, as well as funds obtained from individuals and legal entities through other revenue-generating activities. An analysis of the contents and structure of the contracts signed in 2019 by source of financing can be found in Tables 6.4, 6.5, and Figure 6.4.

Table 6.4

### ANALYSIS OF THE NUMBER AND STRUCTURE OF THE CONTRACTS (AGREEMENTS) SIGNED IN 2018-2019 BY THE SOURCE OF FINANCING

No.	Source of financing	Volume of signed contracts (agreements)					
		Number, pcs.		Difference (+, -), pcs.	Percentage of the total, %		Percentage variation, points
		2018	2019		2018	2019	
1	Grants; funds provided to fulfil contracts; as well as funds obtained from individuals and legal entities through other revenue-generating activities	2,031	1,685	-346	81.04	86.37	+5.33
2	Subsidies obtained from the Russian Federation state budget resources	475	266	-209	18.96	13.63	-5.33
Total		2,506	1,951	-555	100.00	100.00	-

Note that the number of contracts (agreements) signed in 2019 compared to 2018 decreased by 555 units, or by 22.2%. This is due to the increase in the volume of purchase of goods, works, and services and the placement of orders based on the competitive selection of suppliers (contractors, agents) financed by subsidies from the budget of Russian Federation state budget resources and grants, funds provided to fulfil state contracts, and as a result of other revenue-generating activities.

Table 6.5

### ANALYSIS OF THE VALUE AND STRUCTURE OF CONTRACTS (AGREEMENTS) SIGNED IN 2018-2019 BY SOURCE OF FINANCING

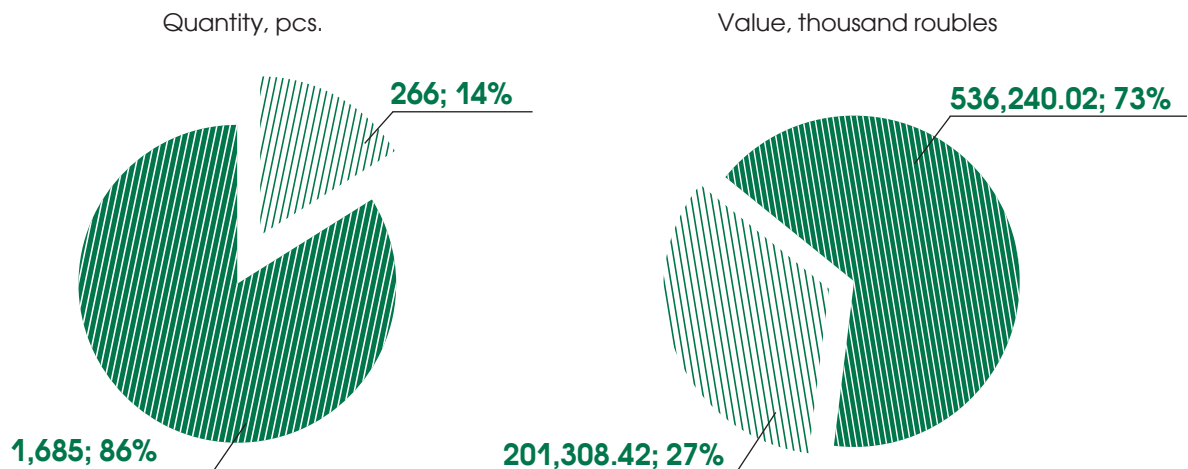
No.	Source of financing	Volume of signed contracts (agreements)					
		Value, thousand roubles		absolute difference, thousand roubles (+, -)	Percentage of the total, %		Percentage variation, points
		2018	2019		2018	2019	
1	Grants; funds provided to fulfil contracts; as well as funds obtained from individuals and legal entities through other revenue-generating activities	218,879.54	536,240.02	+317,360.48	33.82	72.71	+38.89
2	Subsidies obtained from the Russian Federation state budget resources	428,362.46	201,308.42	-227,054.04	66.18	27.29	-38.89
Total		647,242.00	737,548.44	+90,306.44	100.00	100.00	-



As for the total financing for the procurement of goods, works, and services in 2019 the volume increased by 90,306.44 thousand roubles, which amounted to 114.0%. The financing of purchasing activities through subsidies decreased significantly and amounted to 27.3% of the total volume of purchases in the reporting period. The financing for the procurement of goods, works, and services through grants, funds provided to fulfil contracts, as well as funds obtained from individuals and legal entities through other revenue-generating activities increased and amounted to 72.71% of the total volume of purchases.

Figure 6.4

#### VOLUME AND STRUCTURE OF CONTRACTS SIGNED IN 2019



/// Grants; funds obtained from contract execution; as well as funds obtained from individuals and legal entities through other revenue-generating activities

//// Subsidies obtained from the Russian Federation state budget resources



Information about the contracts signed through various methods of selecting the supplier (contractor, agent) are presented in Tables 6.6 and 6.7 and in Figures 6.5 and 6.6.

Table 6.6

### ANALYSIS OF THE VOLUME AND STRUCTURE OF CONTRACTS SIGNED AS PART OF ORDERS PLACED FOR THE PURCHASE OF GOODS, WORKS, AND SERVICES IN 2018-2019

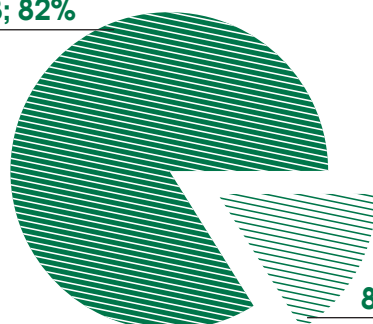
No.	Source of financing	The volume of contracts signed based upon a competitive selection of the supplier (contractor or agent).					
		Value, thousand roubles		Absolute difference, thousand roubles (+, -)	Percentage of the total, %		Percentage variation, points
		2018	2019		2018	2019	
1	Grants; funds obtained from contract execution; as well as funds obtained from individuals and legal entities through other revenue-generating activities	64,179.57	369,976.78	+305,797.21	26.12	81.57	+0.45
2	Subsidies provided from the Russian Federation state budget resources	181,487.70	83,573.58	-97,914.12	73.88	18.43	-0.45
<b>Total</b>		<b>245,667.27</b>	<b>453,550.36</b>	<b>+207,883.09</b>	<b>100.00</b>	<b>100.00</b>	<b>-</b>

The data in Table 6.6 show that in the reporting period, the volume of purchases of goods, works, and services carried out using competitive selection of supplier (contractor, agent) increased by 207.8 million roubles, which amounted to 84.6% of the corresponding value in 2018. The volume of financing for procurement using subsidies obtained from the Russian Federation state budget resources decreased by almost 98 million roubles (or 53.9%). In the structure of procurement sources of financing, the share of subsidies from the Russian Federation state budget resources decreased to 18.43% of the university's financing for procurement by competitive methods for determining the supplier (contractor, agent).

Figure 6.5

### VOLUME OF CONTRACTS SIGNED IN 2019 AS PART OF ORDERS PLACED FOR THE PURCHASE OF GOODS, WORKS, AND SERVICES, THOUSAND ROUBLES

**369,976.78; 82%**



Grants; funds obtained from contract execution; as well as funds obtained from individuals and legal entities through other revenue-generating activities

Subsidies obtained from the Russian Federation state budget resources

**83,573.58; 18%**



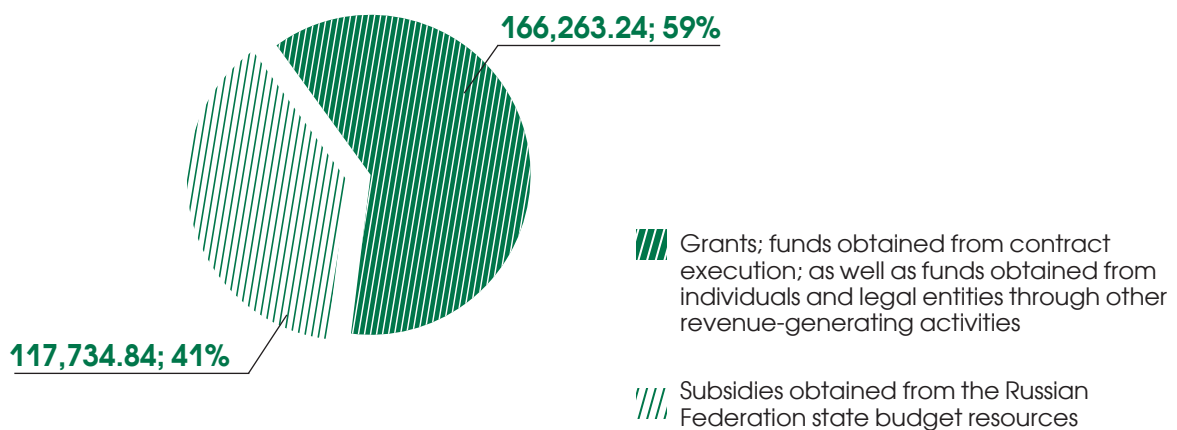
Table 6.7

ANALYSIS OF THE VOLUME AND STRUCTURE OF CONTRACTS SIGNED IN 2018–2019 AS PART OF A PURCHASE FROM A SINGLE SUPPLIER (CONTRACTOR, AGENT)

No.	Source of financing	The volume of contracts of purchase from a single supplier (contractor, agent)					
		Value, thousand roubles		Absolute difference, thousand roubles (+, -)	Percentage of the total, %		Percentage variation, points
		2018	2019		2018	2019	
1	Grants; funds provided to fulfil contracts; as well as funds obtained from individuals and legal entities through other revenue-generating activities	152,725.18	166,263.24	+13,538.06	38.23	58.54	+20.32
2	Subsidies obtained from the Russian Federation state budget resources	246,787.09	117,734.84	-129,052.25	61.77	41.46	-20.32
Total		399,512.27	283,998.08	-115,514.19	100.00	100.00	-

Figure 6.6

VOLUME OF PURCHASE CONTRACTS FROM A SINGLE SUPPLIER IN 2019 (CONTRACTOR, AGENT), THOUSAND ROUBLES



In 2019, as part of a purchase from a single supplier (contractor, agent), 1.6 times fewer contracts were signed than contracts with a competitive selection of supplier (contractor, agent). These contracts were primarily (58.5%) financed by grants; funds obtained from state contract execution; as well as funds obtained from individuals and legal entities through other revenue-generating activities. It should be noted that since 2016, the purchases of goods, works, and services, both those based on the competitive selection of supplier (contractor, agent), and with a single supplier (contractor, agent) were mainly funded with subsidies obtained from the Russian Federation state budget resources. In the reporting period, this trend was bucked in favour of financing purchases from funds obtained from individuals and legal entities through other revenue-generating activities.

Considerable attention should be paid to the analysis of the composition of expenses for the procurement of goods, work, services carried out by a single supplier (contractor, agent) belonging to non-competitive selection of supplier (contractor, agent) (Tables 6.8, 6.9 and Figures 6.7, 6.8).

Table 6.8

#### ANALYSIS OF THE CONTENTS AND STRUCTURE OF THE NUMBER OF PURCHASE CONTRACTS IN 2018-2019 FROM A SINGLE SUPPLIER (CONTRACTOR, AGENT) BY THE MAIN ITEMS OF EXPENDITURE

No.	Item of expenditure	Volume of contracts signed using grants; funds provided to fulfil contracts; as well as funds obtained from individuals and legal entities through other revenue-generating activities					
		Quantity, pcs.		Absolute difference, pcs. (+, -)	Percentage of the total, %		Percentage variation, points, % (+, -)
		2018	2019		2018	2019	
1	Additions to property, plant, and equipment	36	83	47	1.86	5.51	3.65
2	Materials	496	269	-227	25.62	17.86	-7.76
3	Research	171	45	-126	8.83	2.99	-5.84
4	Repairs	37	24	-13	1.91	1.59	-0.32
5	Utilities	20	23	3	1.04	1.53	0.49
6	Teaching services provided by non-payroll employees	454	482	28	23.45	32.01	8.55
7	State fees and membership dues	245	84	-161	12.65	5.58	-7.08
8	Other operational expenses	477	496	19	24.64	32.93	8.30
<b>Total</b>		<b>1936</b>	<b>1506</b>	<b>-430</b>	<b>100</b>	<b>100</b>	<b>-</b>



Table 6.9

ANALYSIS OF THE CONTENTS AND STRUCTURE OF THE COST OF PURCHASE CONTRACTS IN 2018-2019 FROM A SINGLE SUPPLIER (CONTRACTOR, AGENT) BY THE MAIN ITEMS OF EXPENDITURE

No.	Item of expenditure	Volume of contracts signed using grants; funds provided to fulfil contracts; as well as funds obtained from individuals and legal entities through other revenue-generating activities					
		Value, thousand roubles		Absolute difference, thousand roubles (+, -)	Percentage of the total, %		Percentage variation, points, % (+, -)
		2018	2019		2018	2019	
1	Additions to property, plant, and equipment	5,370.02	6,337.29	967.27	3.52	3.81	0.30
2	Materials	44,556.84	26,496.97	-18,059.87	29.17	15.94	-13.24
3	Research	43,941.96	12,700.96	-31,241	28.77	7.64	-21.13
4	Repairs	3,532.05	2,112.98	-1,419.07	2.32	1.27	-1.04
5	Utilities	10,388.44	63,101.71	52,713.27	6.8	37.95	31.15
6	Teaching services provided by non-payroll employees	8,135.97	10,235.63	2,099.66	5.33	6.16	0.83
7	State fees and membership dues	1,974.79	925.54	-1,049.25	1.29	0.56	-0.74
8	Other operational expenses	34,825.12	44,352.16	9,527.04	22.8	26.67	3.87
Total		152,725.19	166,263.24	13,538.05	100.00	100.00	-

Figure 6.7

ANALYSIS OF THE CONTENTS AND STRUCTURE OF THE PURCHASE CONTRACTS IN 2019 FROM A SINGLE SUPPLIER (CONTRACTOR, AGENT), BY THE MAIN ITEMS OF EXPENDITURE, PCS.

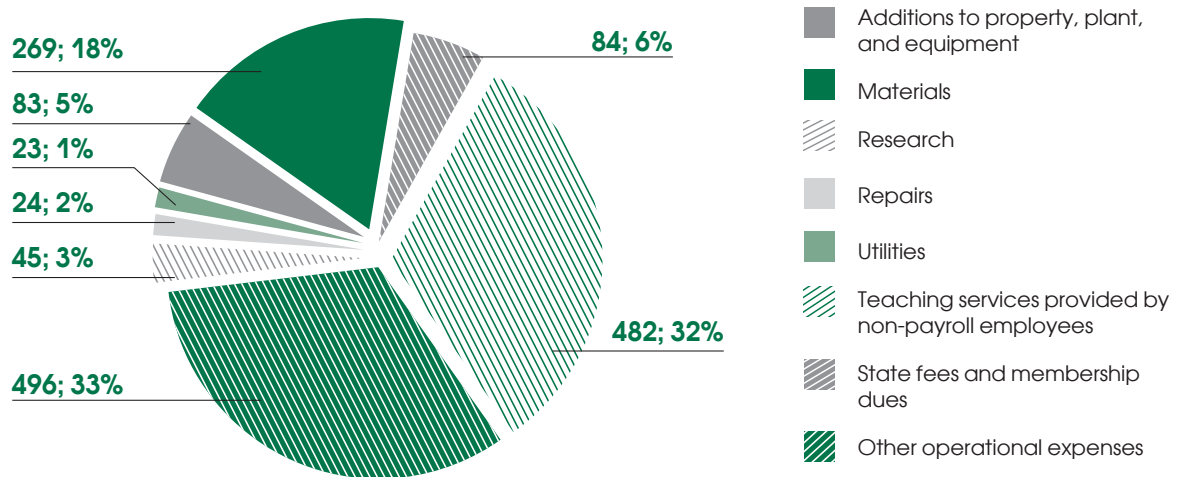
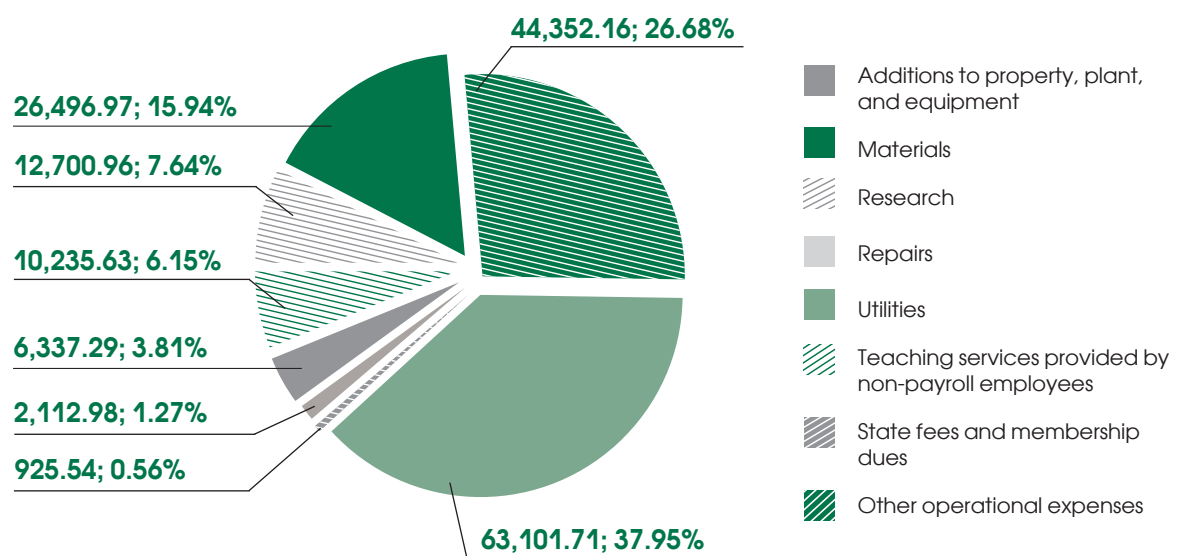


Figure 6.8

ANALYSIS OF THE CONTENTS AND STRUCTURE OF THE VOLUME OF PURCHASE CONTRACTS IN 2018-2019 FROM A SINGLE SUPPLIER (CONTRACTOR, AGENT) BY THE MAIN ITEMS OF EXPENDITURE, THOUSAND ROUBLES





The analysis of the contents and structure of purchase contracts from a single supplier (contractor, agent) by the main items of expenditure shown in Tables 6.8 and 6.9, demonstrates that the largest number of contracts were related to contracts signed for purchase of materials and payment for teaching services provided by non-payroll employees to meet the needs of the university, which was 18 and 32% of the total number of contracts for purchase of goods, works, and services from a single supplier (contractor, agent). A considerable percentage of the value of signed contracts using non-competitive selection of supplier (contractor, agent) is accounted for by utility bills, which is 37.95%, an increase over the reporting period was more than 30%.

Table 6.10 shows an analysis of the contents and structure of the contracts signed in 2019 and financed through subsidies obtained from the Russian Federation state budget resources, signed through various methods of competitive selection of the supplier (contractors, agent).

Table 6.10

ANALYSIS OF THE VOLUME AND STRUCTURE OF THE NUMBER OF CONTRACTS SIGNED IN 2018-2019 FINANCED BY THE SUBSIDIES OBTAINED FROM THE RUSSIAN FEDERATION STATE BUDGET RESOURCES, BASED ON VARIOUS METHODS OF SELECTION OF SUPPLIER (CONTRACTOR, AGENT)

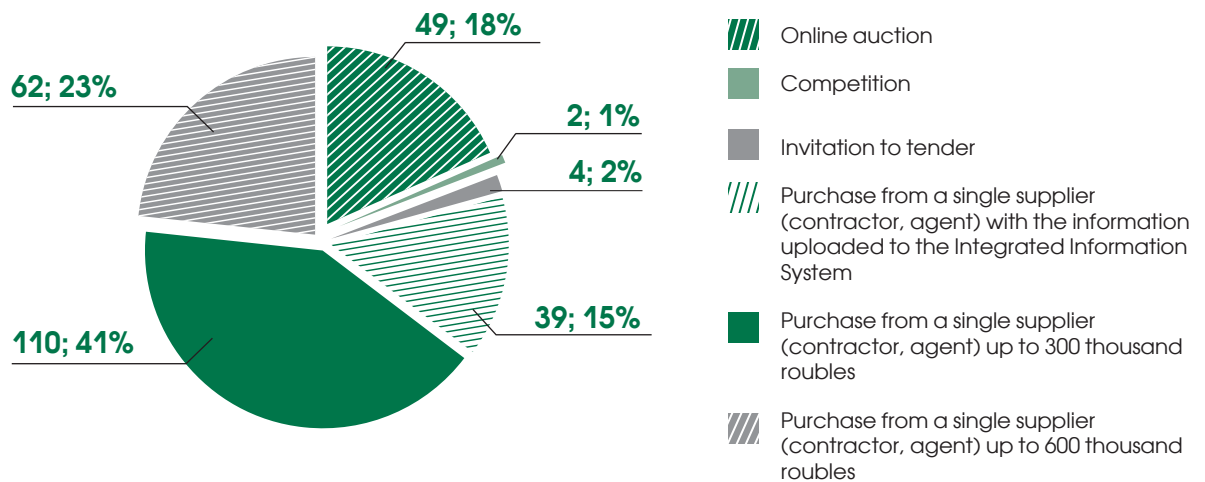
No.	Method of supplier selection	Volume of signed contracts					
		Quantity, pcs.		Absolute difference, pcs. (+, -)	Percentage of the total, %		Percentage variation, points
		2018	2019		2018	2019	
1	Online auction	78	49	-29	16.42	18.42	+ 2.00
2	Competition	2	2	0	0.42	0.75	+0.33
3	Invitation to tender	15	4	-11	3.16	1.51	-1.65
4	Purchase from a single supplier (contractor, agent) with the information uploaded into the Integrated Information System	75	39	-36	15.79	14.66	-1.13
5	Purchase from a single supplier (contractor, agent) up to 300 thousand roubles	226	110	-116	47.58	41.35	-6.23
6	Purchase from a single supplier (contractor, agent) up to 600 thousand roubles	79	62	-17	16.63	23.31	+6.68
<b>Total</b>		<b>475</b>	<b>266</b>	<b>-209</b>	<b>100.00</b>	<b>100.00</b>	<b>-</b>



It should be noted that the number of signed contracts funded by subsidies obtained from the Russian Federation state budget resources, purchases of up to 300 thousand roubles from a single supplier (contractor, agent) hold a leading position at the university, (41.35% of the total volume of signed contracts). It should be noted that the percentage of these contracts when compared to the previous year decreased by 6.23%. In second place are contracts for the purchase of goods, works, and services with a single supplier (contractor, agent) up to 600 thousand roubles, the percentage of which is 23.31%. Compared to the previous year, the share of these contracts increased by 6.68%. In third place are purchases using online auctions (18.42% of the total volume of contracts signed using this source of financing).

Figure 6.9

**ANALYSIS OF THE VOLUME OF CONTRACTS IN 2019 FINANCED THROUGH SUBSIDIES OBTAINED FROM THE RUSSIAN FEDERATION STATE BUDGET RESOURCES SIGNED THROUGH VARIOUS METHODS OF COMPETITIVE SELECTION OF SUPPLIER (CONTRACTOR, AGENT)**





The contracts financed through subsidies obtained from the Russian Federation state budget resources were mainly signed as a result of purchases from a single supplier (contractor, agent) with the information uploaded into the integrated Information System (48.55% of the total volume of contracts signed) (Table 6.11). In the reporting year, the share of these contracts decreased by 2.61%, the value of contracts signed decreased by a more than 121 million roubles. In second place is online auctions (33.33% of the total volume of the contracts signed using this source of financing). The use of the competitive selection of supplier (contractor, agent) through an online auction during the reporting period also decreased in terms of the volume of contracts signed by 104,893.69 thousand roubles.

Table 6.11

ANALYSIS OF THE VOLUME OF THE CONTRACTS SIGNED IN 2018-2019 AND FINANCED THROUGH SUBSIDIES OBTAINED FROM THE RUSSIAN FEDERATION STATE BUDGET RESOURCES SIGNED THROUGH VARIOUS METHODS OF COMPETITIVE SELECTION OF THE SUPPLIER (CONTRACTOR, AGENT)

No.	Method of determining the supplier (contractor, agent)	Volume of signed contracts					
		Value, thousand roubles		Absolute difference, thousand roubles (+, -)	Percentage of the total, %		Percentage variation, points
		2018	2019		2018	2019	
1	Online auction	171,983.31	67,089.62	-104,893.69	40.16	33.33	-6.83
2	Competition	3,900	16,397.75	+12,497.75	0.91	8.15	+7.24
3	Invitation to tender	5,604.40	86.20	-5,518.2	1.31	0.04	-1.27
4	Purchase from a single supplier (contractor, agent) with the information uploaded into the Integrated Information System	219,097.85	97,728.97	-121,368.88	51.16	48.55	-2.61
5	Purchase from a single supplier (contractor, agent) up to 300 thousand roubles.	7,748.10	3,705.16	-4,042.94	1.81	1.84	+0.03
6	Purchase from a single supplier (contractor, agent) up to 600 thousand roubles.	19,941.14	16,300.72	-3,640.42	4.65	8.09	+3.44
<b>Total</b>		<b>428,274.80</b>	<b>201,308.42</b>	<b>-226,966.38</b>	<b>100.00</b>	<b>100.00</b>	<b>-</b>

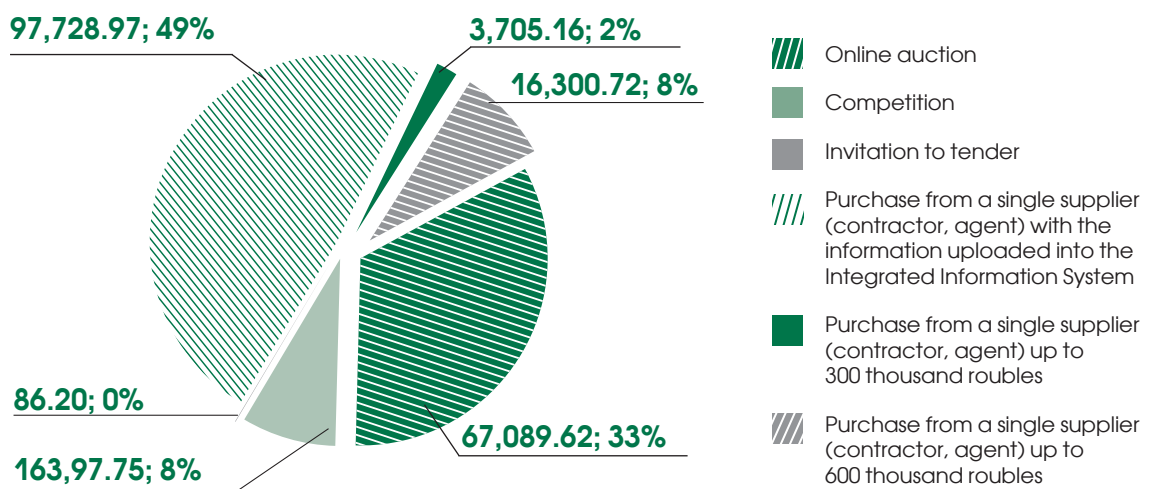




The largest percentage was accounted for by the contracts signed as a result of purchases from single suppliers (contractors, agents) (from a single supplier (contractor, agent) up to 300 thousand roubles, up to 600 thousand roubles, and also from a single supplier (contractor, agent) with the information uploaded to the Integrated Information System), which altogether accounts for 58.48% of the total number of contracts funded with subsidies obtained from the Russian Federation state budget resources.

Figure 6.10

ANALYSIS OF THE VOLUME AND STRUCTURE OF CONTRACTS SIGNED IN 2019 AND FUNDED WITH SUBSIDIES OBTAINED FROM THE RUSSIAN FEDERATION STATE BUDGET RESOURCES USING VARIOUS METHODS FOR SELECTION OF SUPPLIER (CONTRACTOR, AGENT)





Other sources of funding were grants; funds obtained through the signing of contracts; as well as funds obtained from individuals and legal entities through other revenue-generating activities. The analysis of the structure of the contracts of purchase from a single supplier (contractor, agent), in quarterly periods of 2019, is shown in Tables 6.12 and 6.13 and in Figures 6.11 and 6.12.

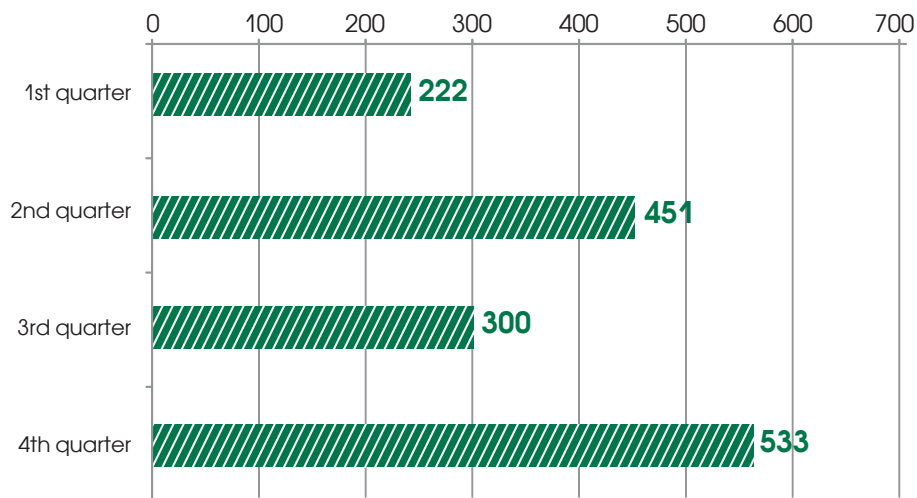
**Table 6.12**

**ANALYSIS OF THE VOLUME AND STRUCTURE OF PURCHASE CONTRACTS SIGNED IN 2018-2019 FROM A SINGLE SUPPLIER (CONTRACTOR, AGENT)**

No.	Period	The volume of contracts signed using grants; funds provided to fulfil contracts; as well as funds obtained from individuals and legal entities through other revenue-generating activities					
		Quantity, pcs.		Absolute difference, pcs. (+, -)	Percentage of the total, %		Percentage variation, points
		2018	2019		2018	2019	
1	1st quarter	299	222	-77	15.44	14.74	-0.70
2	2nd quarter	599	451	-148	30.94	29.95	-0.99
3	3rd quarter	416	300	-116	21.49	19.92	-1.57
4	4th quarter	622	533	-89	32.13	35.39	+3.26
<b>Total</b>		<b>1,936</b>	<b>1,506</b>	<b>-430</b>	<b>100.00</b>	<b>100.00</b>	<b>-</b>

**Figure 6.11**

**ANALYSIS OF THE STRUCTURE OF THE NUMBER OF PURCHASE CONTRACTS FROM A SINGLE SUPPLIER (CONTRACTOR, AGENT), PCS.**



The maximum percentage (35.39%) of purchase contracts from a single supplier (contractor, agent) was accounted for by purchases in the 4th quarter of 2019. With regard to this indicator in terms of value, the maximum share of the contracts were also signed in the 4th quarter of 2019 (61.74%).

In 2018, the maximum percentage of purchase contracts from a single supplier (contractor, agent) were accounted for purchases in the 4th quarter (43.84%). The quarterly value of goods, works, and services purchased exceeded the average by 18.84%. As for the same value in 2019, the deviation from the average quarterly purchase value in the 4th quarter of 2018 was +17.91%.

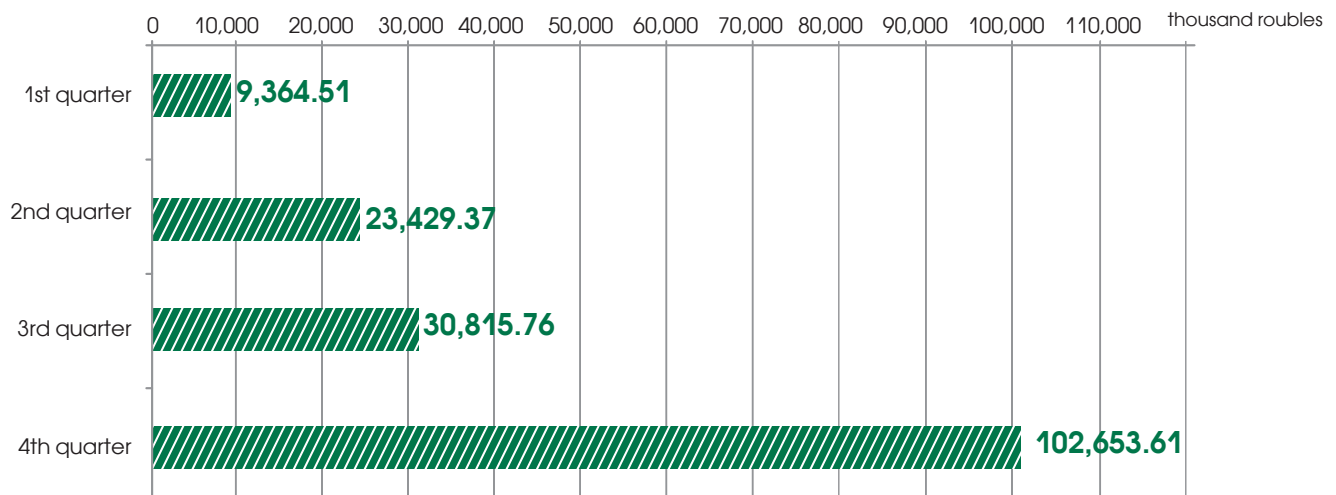
Table 6.13

### ANALYSIS OF THE VOLUME AND STRUCTURE OF PURCHASE CONTRACTS SIGNED IN 2018-2019 FROM A SINGLE SUPPLIER (CONTRACTOR, AGENT)

No.	Period	Volume of contracts signed using grants; funds provided to fulfil contract; as well as funds obtained from individuals and legal entities through other revenue-generating activities					
		Value, thousand roubles		Absolute difference, thousand roubles (+, -)	Percentage of the total, %		Percentage variation, points
		2018	2019		2018	2019	
1	1st quarter	20,026.32	9,364.51	-10,661.81	12.93	5.63	-7.30
2	2nd quarter	29,573.70	23,429.37	-6,144.33	19.09	14.09	-5.00
3	3rd quarter	37,392.51	30,815.76	-6,576.75	24.14	18.54	-5.61
4	4th quarter	67,895.20	102,653.61	+34,758.41	43.84	61.74	+17.91
Total		154,887.73	166,263.25	11,375.52	100.0	100.0	-

Figure 6.12

### ANALYSIS OF THE STRUCTURE OF THE VALUE OF PURCHASE CONTRACTS FROM A SINGLE SUPPLIER (CONTRACTOR, AGENT)





The data presented in Table 6.13 shows that for the value of contracts from a single supplier (contractor, agent) uniform procurement was substantially impaired. For the 1st quarter of 2019, 5.63% of the volume is accounted for purchases from a single supplier (contractor, agent). Compared with 2018, this value has decreased by 7.3%. A significant influence on the condition of uniformity is exerted by the percentage of the procurement of goods, works, and services in the 4th quarter of 2019. As part of the condition for the uniform procurement of goods, works, and services for quarterly periods, the impairment of uniformity is 36.74%.

The unified schedule of orders from Voronezh State University subdivisions was created using a unified purchasing request form, the template for which may be found on the VSU website. In the reporting period, 1,693 request were accepted from the structural subdivisions as part of the registration procedure for the procurement of goods, works, and services for the planning period. Compared to 2018, the number of requests increased by 183 units, which amounted to 12.12%. The information on the number of submitted requests and their changes is presented in Table 6.14 and Figure 6.13.

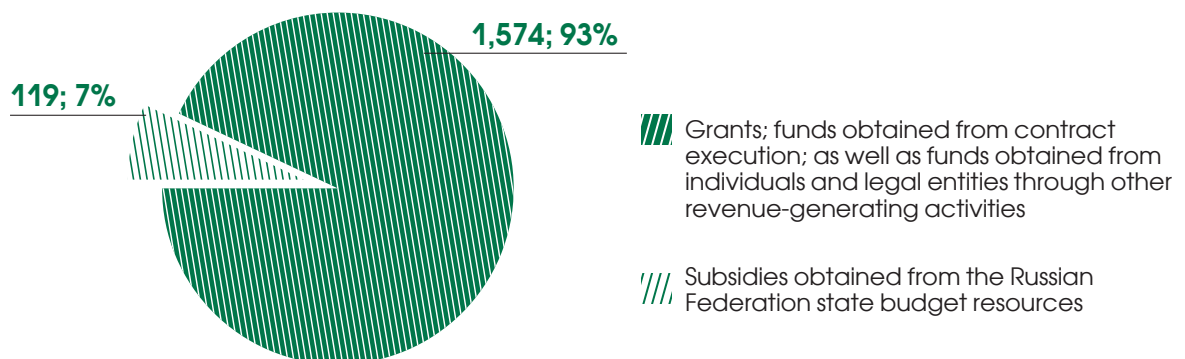
Table 6.14

#### ANALYSIS OF THE NUMBER OF SUBMITTED REQUESTS FOR ALL SOURCES OF FINANCING FOR PURCHASING ACTIVITIES IN 2018-2019

No.	Source of financing	Information on the requests submitted					
		Quantity, pcs.		Absolute difference, pcs. (+, -)	Percentage of the total, %		Percentage variation, points
		2018	2019		2018	2019	
1	Grants; funds obtained from contract execution; as well as funds obtained from individuals and legal entities through other revenue-generating activities	1,262	1,574	+312	83.58	92.97	+9.39
2	Subsidies obtained from the Russian Federation state budget resources	248	119	-129	16.42	7.03	-9.39
Total		1,510	1,693	+183	100.00	100.00	-

Figure 6.13

#### ANALYSIS OF THE STRUCTURE OF SUBMITTED REQUESTS AND THEIR CHANGES BY FINANCIAL SOURCES FOR THE PURCHASE OF GOODS, WORKS, AND SERVICES





Certain structural subdivisions did not submit requests during the fixed planning dates. These types of purchase requests were included in the time-schedules based on the written statements from the subdivisions and changes to the schedules in the Integrated Information System (IIS) (Table 6.15, Figure 6.14).

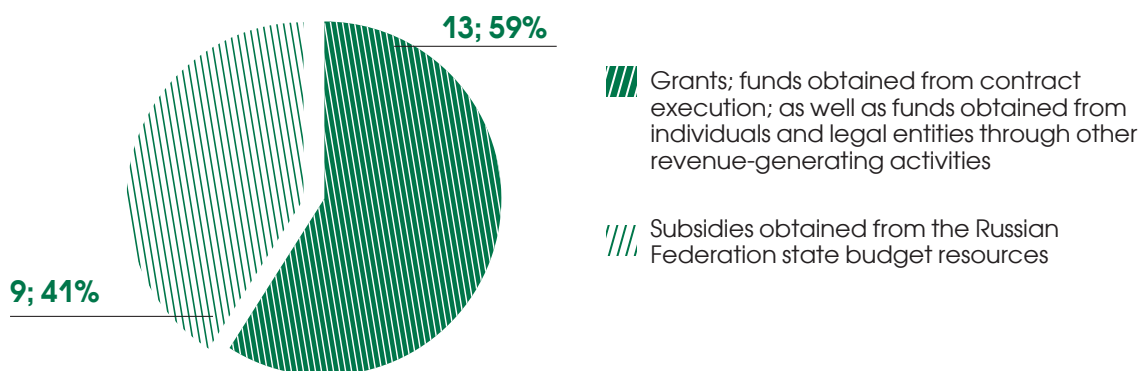
Table 6.15

ANALYSIS OF THE NUMBER OF MODIFICATIONS IN 2018-2019 IN THE TIME-SCHEDULE FOR ALL SOURCES OF FINANCING FOR THE PURCHASING ACTIVITIES

No.	Source of financing	Number of changes made to the time-schedule					
		Quantity, pcs.		Absolute difference, thousand roubles (+, -)	Percentage of the total, %		Percentage variation, points
		2018	2019		2018	2019	
1	Grants; funds obtained from signed contracts; as well as funds obtained from individuals and legal entities through other revenue-generating activities	11	13	+2	47.83	59.09	+11.26
2	Subsidies obtained from the Russian Federation state budget resources	12	9	-3	52.17	40.91	-11.26
Total		23	22	-1	100.00	100.00	-

Figure 6.14

ANALYSIS OF THE CHANGES TO THE TIME-SCHEDULE FOR THE PROCUREMENT OF GOODS, WORKS, AND SERVICES





The time-schedule for purchases using the subsidies obtained from the Russian Federation state budget resources was modified 9 times during the calendar reporting period, i.e. less than once per month. Thus, as a result of 9 modifications, 52% of the items on the time-schedule were corrected. There were 13 modifications to the provisions of the time-schedule for purchases due to the implementation of Federal Law No. 223-FZ, i.e. more than once per month. Compared with the data from 2018, the number of changes increased by 2, or 11.26%. It should be noted that in 2016, 54 changes were made to the provisions of the time-schedule for purchases. The decrease in the number of changes characterizes the strengthening of executive discipline in the area of organizing information on the procurement of goods, works, and services. The number of modifications of the provisions of the time-schedule for purchases decreased by 4.35%, due to the improved quality in the planning of the university's purchase activities.

Table 6.16

ANALYSIS OF THE VOLUME AND STRUCTURE OF CONTRACTS SIGNED AS PART OF ORDER PLACEMENT FOR PURCHASING GOODS, WORKS AND SERVICES IN 2018-2019

No.	Source of financing	Volume of contracts signed based on the competitive selection of a supplier (contractor, agent)					
		Value, thousand roubles		Absolute difference, thousand roubles (+, -)	Percentage of the total, %		Percentage variation, points
		2018	2019		2018	2019	
1	Grants; funds obtained from signed contracts; as well as funds obtained from individuals and legal entities through other revenue-generating activities	64,179.57	369,976.78	+305,797.21	26.12	81.57	+55.45
2	Subsidies provided from the Russian Federation state budget resources	181,487.70	83,573.58	-97,914.12	73.88	18.43	-55.45
Total		245,667.27	453,550.36	+207,883.09	100.00	100.00	-



As a part of the implementation of Federal Law No. 223-FZ of 18 July 2011, 1,574 requests were accepted and 1,685 contracts were signed for the amount of 536,240.02 thousand roubles. Thus, the amount of money saved based on the competitive selection of supplier (contractor, agent) amounted to 14,910.11 thousand roubles, or 3.87% of the initial maximum cost of submitted requests.

During the formation of the unified time-schedule for purchases, due to the implementation of Federal Law No. 223-FZ of 18 July 2011, 119 requests were accepted and 266 contracts were signed for the amount of 201,308.42 thousand roubles. Thus, the amount of money saved as a result of following the purchasing procedure amounted to 1,572.94 roubles, or 1.85 % of the initial maximum cost of the submitted requests (Table 6.18, Figure 6.15).

Table 6.17

#### ANALYSIS OF THE VOLUME OF CONTRACTS AT THE INITIAL MAXIMUM PRICE BASED ON THE COMPETITIVE SELECTION OF SUPPLIER BY SOURCE OF FINANCING

No.	Source of financing	Initial maximum contract price					
		Value, thousand roubles		Absolute difference, thousand roubles (+, -)	Percentage of the total, %		Percentage variation, points
		2018	2019		2018	2019	
1	Grants; funds obtained from contract execution; as well as funds obtained from individuals and legal entities through other revenue-generating activities	71,315.87	384,886.89	+313,571.02	27.21	81.89	+54.68
2	Subsidies obtained from the Russian Federation state budget resources	190,808.56	85,146.52	-105,662.04	72.79	18.11	-54.68
Total		262,124.43	470,033.41	+207,908.98	100.00	100.00	-

Table 6.18

### AMOUNT OF MONEY SAVED THROUGH THE COMPETITIVE SELECTION OF SUPPLIERS (CONTRACTOR, AGENT) BY SOURCE OF FINANCING

No.	Source of financing	Amount of money saved, thousand roubles					
		Value, thousand roubles		Absolute difference, thousand roubles (+, -)	Percentage of the total, %		Percentage variation, points
		2018	2019		2018	2019	
1	Grants; funds obtained from contract execution; as well as funds obtained from individuals and legal entities through other revenue-generating activities	7,136.30	14,910.11	+7,773.81	43.36	90.46	+47.09
2	Subsidies obtained from the Russian Federation state budget resources	9,320.86	1,572.94	-7,747.92	56.64	9.54	-47.09
Total		16,457.16	16,483.05	+25.89	100.00	100.00	-

Figure 6.15

### STRUCTURE OF THE AMOUNT OF MONEY SAVED THROUGH THE COMPETITIVE SELECTION OF SUPPLIERS (CONTRACTOR, AGENT) BY SOURCE OF FINANCING

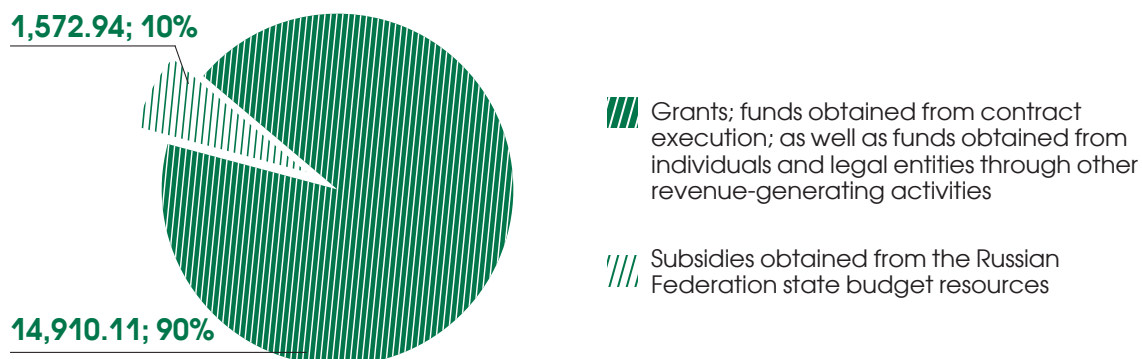


Table 6.18 demonstrates that in the reporting period, the amount of financial savings in the source of financing “subsidies obtained from the Russian Federation state budget resources” significantly decreased and contributed 9.54% to the total cost savings. The money saved amounted to 1,572.94 thousand roubles, or 1.85% 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 14,910.11 thousand roubles, which is 90.46 % of the total cost savings. It should be noted that the increase of total financing of products, works, and services in 2019 was carried out with a significant reduction in the volume of purchases of goods, works, and services due to subsidies provided from the Russian Federation state budget resources. This is associated with a reduction in the use of competitive methods for the selection of supplier (contractor, agent) and an increase in the volume of contracts signed with a single supplier (contractor, agent).



## 6.7. VSU FINANCIAL ACTIVITIES ANALYSIS

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 shown in Tables 6.19 and 6.20.

Table 6.19

### VSU ASSET DYNAMICS IN 2019 ACCORDING TO DATA FROM THE BALANCE SHEET

No.	Asset items	As of the beginning of 2019	As of the end of 2019	Absolute difference	Growth ratio, %
<b>I. Non-financial assets, thousand roubles</b>					
1	Property, plant and equipment (residual value)	1,474,555.7	1,429,456.4	-45,099.3	96.94
2	Intangible assets (residual value)	52.1	30.6	-21.5	58.73
3	Non-produced assets	1,880,579.0	1,882,339.7	+1,760.7	100.09
4	Material inventories	24,404.4	44,026.5	+19,622.1	180.40
5	Rights to use assets	15.5	53.0	+37.5	341.94
6	Investments in non-financial assets	64,117.7	64,141.3	+23.6	100.04
7	Cost of provision of goods, works, and services	0	3,355.3	+3,355.3	-
8	Prepaid expenses	2,292.3	5,281.1	+2,988.8	230.38
<b>9</b>	<b>Total non-financial assets</b>	<b>3,446,016.7</b>	<b>3,428,683.9</b>	<b>-17,332.8</b>	<b>99.50</b>
<b>II. Financial assets, thousand roubles</b>					
10	Cash and cash equivalents	408,760.5	732,714.8	+323,954.3	179.25
11	Accounts receivable for the settlement of revenues	28,738.7	1,569,811.8	+1,541,073.1	5,462.36
12	Accounts receivable for payments	28,211.7	11,266.9	-16,944.8	39.94
13	Other settlements with debtors	4,244.8	1,241.5	-3,003.3	29.25
<b>14</b>	<b>Total financial assets</b>	<b>469,955.7</b>	<b>2,315,035.0</b>	<b>+1,845,079.3</b>	<b>492.61</b>
<b>15</b>	<b>Total VSU assets (grand total)</b>	<b>3,915,972.4</b>	<b>5,743,718.9</b>	<b>+1,827,746.5</b>	<b>146.67</b>

In 2019, the grand total increased by 1,827,746.5 thousand roubles (46.7%) and amounted to 5,743,718.9 thousand roubles. This increase is due to a change in how information regarding revenue is reported in accordance with the order of the Ministry of Finance of the Russian Federation No. 32n dated 02/27/2018 - "Revenues" (the increase amounted to 1,845,079.3 thousand roubles).

Table 6.20

### DYNAMICS OF SOURCES OF THE FORMATION OF VSU ASSETS IN 2019 ACCORDING TO DATA FROM THE BALANCE SHEET

No.	Liability items	As of the beginning of 2019	As of the end of 2019	Absolute change	Growth ratio, %
<b>I. Liabilities, thousand roubles</b>					
1	Accounts payable for payments	18,610.5	16,918.3	-1,692.2	90.91
2	Settlements of payments into the budget	7,277.0	9,026.9	1,749.9	124.05
3	Other settlements (settlements of loans)	4,974.2	5,090.2	116	102.33
4	Accounts payable for revenues	262,179.0	476,099.0	213,920	181.59
5	Settlements with the founder	3,807,360.9	3,843,428.3	36,067.4	100.95
6	Deferred revenue	3,148.1	1,552,120.8	1,548,972.7	49,303.41
7	Provisions for future liabilities	108,751.4	105,415.2	-3,336.2	96.93
<b>8</b>	<b>Total liabilities</b>	<b>4,212,301.1</b>	<b>6,008,098.7</b>	<b>1,795,797.6</b>	<b>142.63</b>
<b>II. Financial result, thousand roubles</b>					
9	Financial results of the economic entity	(296,328.6)	(264,379.8)	31,948.8	89.22
<b>10</b>	<b>Total sources of VSU assets (grand total)</b>	<b>3 915 972.4</b>	<b>5 743 718.9</b>	<b>1 827 746.5</b>	<b>146.67</b>

It should be noted that the most mobile part of VSU assets (monetary funds and accounts receivable) increased by almost 5 times, which is also due to federal changes in revenue accounting (1,845,079.3 thousand roubles).

At the end of 2019, the largest percentage in VSU's asset structure was accounted for by non-produced assets (land) (32.8%), property, plant, and equipment (24.9%), settlements with debtors (27.6%), and cash (12.8%) The increase in financial assets in the reporting period led to an increase from 12.1 to 40.4% (Table 6.21).

Table 6.21

### VSU ASSETS STRUCTURE IN 2019 ACCORDING TO DATA FROM THE ANALYTICAL DATA SHEET

No.	Type	Percentage, %		Change (+, -)
		As of the beginning of 2019	As of the end of 2019	
<b>1</b>	<b>Non-financial assets - total</b>	<b>87.9</b>	<b>59.6</b>	<b>-28.3</b>
	Including:			
	Property, plant and equipment (residual value)	37.7	24.9	-12.8
	Non-produced assets	48.0	32.8	-15.2
	Material assets	0.6	0.8	+0.2
	Investments in non-financial assets (capital investments)	1.6	1.1	+0.5
<b>2</b>	<b>Financial assets - total</b>	<b>12.1</b>	<b>40.4</b>	<b>+28.3</b>
	Including:			
	Cash and cash equivalents	10.5	12.8	+2.3
	Settlements with debtors	1.6	27.6	+26.0
<b>3</b>	<b>Total assets</b>	<b>100.0</b>	<b>100.0</b>	<b>-</b>

In 2019, the financial result was positive due to a net operating profit in the reporting period and a corresponding reduction in loss from the operating activities of previous reporting periods. In 2019, the financial result was 31,948.8 thousand roubles.

In 2019, the structure of the formation of VSU's assets includes liabilities to the founder regarding the land, property, plant, and equipment assigned to the university to operate and administer, liabilities to the creditors, and financial result (Table 6.22).

Table 6.22

#### STRUCTURE OF THE SOURCES OF VSU ASSET FORMATION IN 2019 ACCORDING TO DATA FROM THE ANALYTICAL DATA SHEET

No.	Type	Percentage, %		Change (+, -)
		As of the beginning of 2019	As of the end of 2019	
1	<b>Liabilities to the founder</b>	<b>97.2</b>	<b>66.9</b>	<b>-30.3</b>
2	<b>Liabilities to creditors - total</b>	<b>10.4</b>	<b>37.7</b>	<b>+27.3</b>
	Including:			
	Settlement of revenues	6.7	8.3	+1.6
	Settlement of accepted obligations	3.3	2.1	-1.2
	Settlement of payments into the budget	0.2	0.2	-
	Other accounts payable	0.2	27.1	+26.9
3	<b>Financial result (internal funds) - total</b>	<b>(7.6)</b>	<b>(4.6)</b>	<b>+3</b>
4	<b>Total sources of asset formation</b>	<b>100.0</b>	<b>100.0</b>	<b>-</b>

In 2019, there was a decrease of property, plant, and equipment by 36,259.3 thousand roubles. 55.6% of the additions to property, plant, and equipment were financed by VSU and non-repayable receipts and 44.4% were financed from federal subsidies, including targeted subsidies for purchasing property, plant, and equipment (6,518 thousand roubles). The share of internal funds from the total investment of capital investments increased by 16.5% (Table 6.23).

Table 6.23

#### STRUCTURE AND DYNAMICS OF ADDITIONS TO PROPERTY, PLANT, AND EQUIPMENT BY FINANCIAL SOURCE

Financial source	2018		2019		Change (+, -)	
	thousand roubles	Percentage, %	thousand roubles	Percentage, %	thousand roubles	Percentage, %
<b>Property, plant, and equipment purchased - total</b>	<b>126,584.8</b>	<b>100.0</b>	<b>90,325.5</b>	<b>100.0</b>	<b>-36,259.3</b>	<b>-</b>
Including:						
Funded by VSU	49,493.0	39.1	50,226.4	55.6	+733.4	+16.5
Funded by federal subsidies	77,091.8	60.9	40,099.1	44.4	-36,992.7	-16.5



Table 6.24

ANALYSIS OF VSU'S FIXED ASSET DEPRECIATION

No.	Type	As of the beginning of 2019	As of the end of 2019	Absolute change (+, -)	Growth ratio, %
1	Book value of fixed assets, thousand roubles	2,796,432.6	2,866,379.0	69,946.4	102.50
	Including: Real estate of the establishment	1,435,800.4	1,435,800.4	0	100.00
	Most valuable movable assets	550,198.3	614,063.6	63,865.3	111.61
2	Depreciation of fixed assets, thousand roubles	1,321,877.0	1,436,922.7	115,045.7	108.70
	Including: Real estate of the establishment	315,427.8	346,492.9	31,065.1	109.85
	Most valuable movable assets	326,570.7	375,517.8	48,947.1	114.99
3	Net value of property, plant and equipment, thousand roubles	1,474,555.7	1,429,456.3	-45,099.4	96.94
	Including: Real estate of the establishment	1,120,372.6	1,089,307.5	-31,065.1	97.23
	Most valuable movable assets	223,627.7	238,545.8	14,918.1	106.67
4	<b>Coefficient of depreciation, %</b>	<b>47.3</b>	<b>50.1</b>	<b>2.8</b>	<b>×</b>
	Including: Real estate of the establishment	22.0	24.1	2.1	×
	Most valuable movable assets	59.4	61.2	1.8	×

Due to capital investments in property, plant, and equipment the depreciation coefficient of these assets was almost at the same level as in the previous year (depreciation coefficient at the end of the year was 50.1%). As for VSU's real estate, this figure was 24.1%. The book value of fixed assets increased by 69,946.4 thousand roubles, or 2.5% (Table 6.24).

Table 6.25

## ANALYSIS OF VSU'S CURRENT FINANCIAL SOLVENCY

No.	Type	As of the beginning of 2019	As of the end of 2019	Absolute change (+, -)
<b>I. Initial values for analysis, thousand roubles</b>				
1	Cash and cash equivalents	408,760.5	732,714.8	323,954.3
2	Resources in settlements with debtors	61,195.2	1,582,320.3	1,521,125.1
3	Material inventories	24,404.4	44,026.5	19,622.1
4	Total operating assets (Art. 1 + Art. 2 + Art. 3)	494,360.1	2,359,061.6	1,864,701.5
5	Total liabilities to creditors	293,040.7	507,134.5	214,093.8
<b>II. Current solvency ratio</b>				
6	Absolute liquidity ratio (coverage of liabilities to creditors using monetary funds)	1.39	1.44	0.05
7	Marginal liquidity ratio (covering the liabilities to the creditors using monetary funds and the resources in settlements with debtors)	1.60	4.6	3
8	Current liquidity ratio (covering liabilities to creditors using operating assets)	1.69	4.65	2.96

An increase in financial assets in 2019 by 1.8 times, including monetary funds had a positive impact on the current level of VSU's financial solvency. At the end of the reporting period, the university was able to discharge its liabilities to the creditors in full through available funds (Table 6.25).

In the assessment of financial stability, there is a special emphasis on determining the coverage of the fixed assets and other non-current assets having the greatest percentage in the property of the university by long-term sources of financing – 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). At the beginning of 2019, this indicator at Voronezh State University amounted to 102.7%. By the end of the reporting period, there had been a significant increase in the long-term sources of financing (by 3.3%) (Table 6.26).



Table 6.26

COVERAGE OF VSU'S FIXED ASSETS AND OTHER NON-CURRENT ASSETS BY LONG TERM SOURCES OF FINANCING

No.	Type	As of the beginning of 2019	As of the end of 2019	Absolute change (+, -)
1	Net value of property, plant and equipment, thousand roubles	1,474,555.7	1,429,456.4	-45,099.3
2	Net value of intangible assets, thousand roubles	52.1	30.6	-21.5
3	Balance value of non-produced assets, thousand roubles	1,880,579.0	1,882,339.7	1,760.7
4	Investments in non-financial assets, thousand roubles	64,117.7	64,141.3	23.6
<b>5</b>	<b>Total non-current assets (Art. 1 + Art. 2 + Art. 3 + Art. 4), thousand roubles</b>	<b>3,419,304.5</b>	<b>3,375,968.0</b>	<b>-43,336.5</b>
6	Liabilities to the founder, thousand roubles	3,807,360.9	3,843,428.3	36,067.4
7	Financial result (internal funds), thousand roubles	(296,328.6)	(264,379.8)	31,948.8
<b>8</b>	<b>Total value of the sources of non-current asset formation (Art. 6 + Art. 7), thousand roubles</b>	<b>3,511,032.3</b>	<b>3,579,048.5</b>	<b>68,016.2</b>
<b>9</b>	<b>Ratio of the coverage of fixed assets by long-term sources of financing, % (Art. 8 : Art. 5)</b>	<b>102.7</b>	<b>106.0</b>	<b>3.3</b>

According to Table 6.26 there is a slight decrease in total non-current assets. A 3% decrease in the estimated value of property, plant, and equipment slightly affected the final result of capital asset coverage.



Table 6.27

## VSU ASSET TURNOVER ANALYSIS

No.	Type	2019
<b>I. Initial values for analysis, thousand roubles</b>		
1	Average annual cash balance	570,737.7
2	The average annual amount of funds in settlements with debtors (accounts receivable)	821,757.7
3	Average annual amount of material assets	34,215.5
4	Total average annual amount of operating assets	1,426,710.9
5	Average annual amount of total assets	6,210,915.8
6	Average annual amount of total assets without non-produced assets	2,948,386.3
7	Total revenue of the university	2,823,704.1
<b>II. Asset turnover ratio, days</b>		
8	Turnover period for total assets	802
9	Turnover period for total assets without non-produced assets	381
10	Turnover period for operating assets	184
11	Turnover period in settlements with debtors (accounts receivable)	106
12	Turnover period for material assets	4

Considering the fact that the largest percentage in VSU's property structure is land and property, plant, and equipment, which are long-term assets, the level of the asset turnover remains at an acceptable level (381 days, which is approximately a year, and 802 days if land is taken into consideration). The turnover period for the operating assets was 184 days and the period of settlements with debtors was 106 days (Table 6.27).



Table 6.28

### ANALYSIS OF VSU OPERATING PROFITABILITY

No.	Type	2019
<b>I. Initial values for analysis, thousand roubles</b>		
1	Average annual amount of total assets (residual value)	4,829,845.7
2	Average annual amount of total assets without non-produced assets (residual value)	2,948,386.3
4	Average annual amount of fixed assets (book value)	2,831,405.9
5	Total revenue	2,823,704.1
6	Total expenditure	2,415,112.5
7	Net operating financial result (loss)	31,948.8
<b>II. Profitability of the university's activities, %</b>		
8	Profitability of total assets	0.7
9	Profitability of total assets without non-produced assets	1.1
11	Profitability of property, plant, and equipment	1.2
12	Profitability of the university's revenue	1.2
13	Profitability of the university's expenditures	1.4

In 2019, the minimisation of expenditure led to a positive net operating financial result in the amount of 31,948.8 thousand roubles. There was a growth in revenue from each rouble of total assets (not including the non-produced assets) of 1.1 kopeks, of fixed assets (1.2 kopeks), revenue (1.2 kopeks), and expenditures (1.4 kopeks).





## 6.8. THE DYNAMICS OF THE STAFF REWARD SYSTEM IN 2018–2019

In 2019, the payroll budget of the university (not including the branches) amounted to 1,434,973.4 thousand roubles, including:

- From subsidies (815,719.8 thousand roubles).
- From extra-budgetary funds (619,253.6 thousand roubles).

Compared to 2018, the payroll budget of the university increased by 29.8%, including:

- From subsidies (27.9%).
- From extra-budgetary funds (32.5%) (Figure 6.16).

Figure 6.16

### THE COMPARATIVE ANALYSIS OF THE PAYROLL BUDGET IN 2018 AND 2019

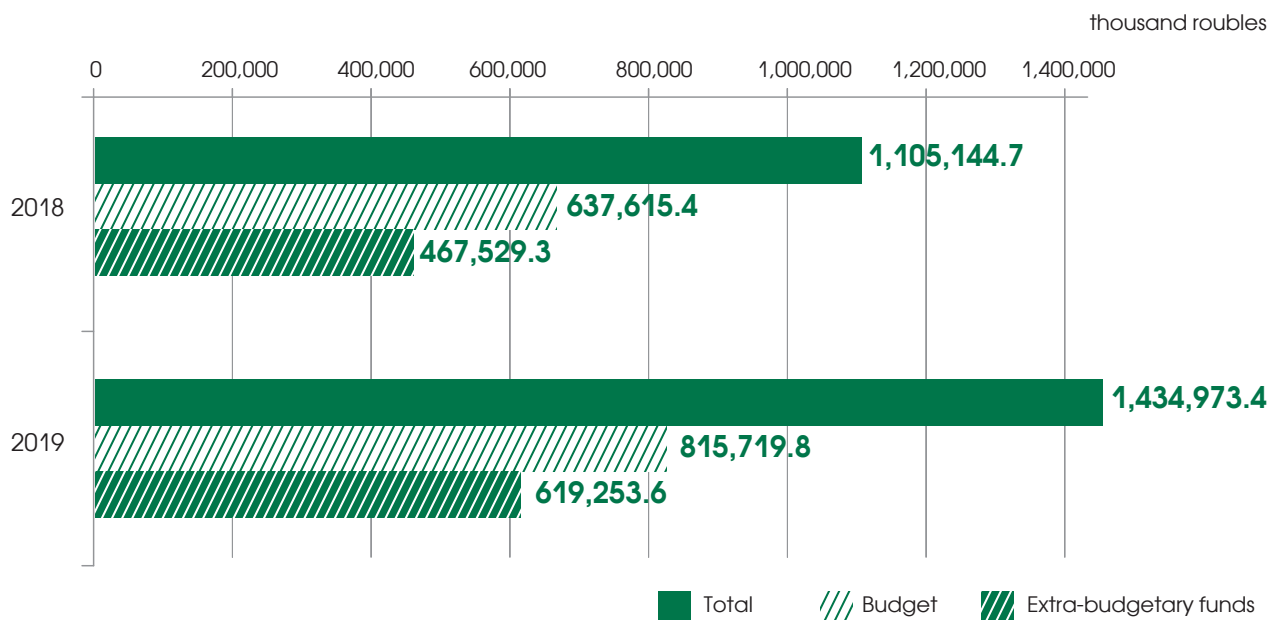
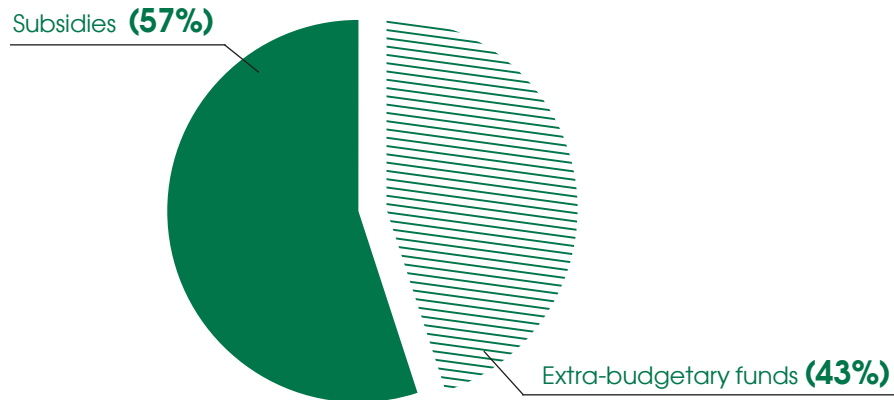


Figure 6.17

## PAYROLL BUDGET STRUCTURE BY THE SOURCE OF FINANCING IN 2019



In 2019, the average salary of university staff members (including payments from all sources) amounted to 37,505 roubles. The average salary of academic staff members was 60,167 roubles, 68,137 roubles for researchers, and 17,852 roubles for other employees.

### MEASURES TAKEN TO RAISE THE SALARIES AND SOCIAL WELFARE OF UNIVERSITY STAFF

In 2019, the practice of using the system of per capita financing to calculate the payroll budget for the academic staff and the payroll budget for other university employees who are not directly involved in rendering state services was continued. The use of this system allowed maintaining the salary level of keeping the salary of academic staff and researchers at a level not less than 200% of the average salary in the region.

During 2019 the salaries were increased:

- Twice, for academic staff and research staff: on January 1 and September 1.
- Once, for other staff: on January 1.

On January 1, 2019, the minimum monthly wage in the Voronezh region was set at the federal level and was 12,130 roubles.

The payment system for academic staff members was changed based on the effective contract. Instead of lump sum payments, monthly allowances were established. The amount of payments under the effective contract for academic staff members was increased from 593.8 thousand roubles in 2018 up to 12,000.0 thousand roubles in 2019 (by 20.2 times). The number of employees receiving this type of payment amounted to 824 people (in 2018 it was 140 people).



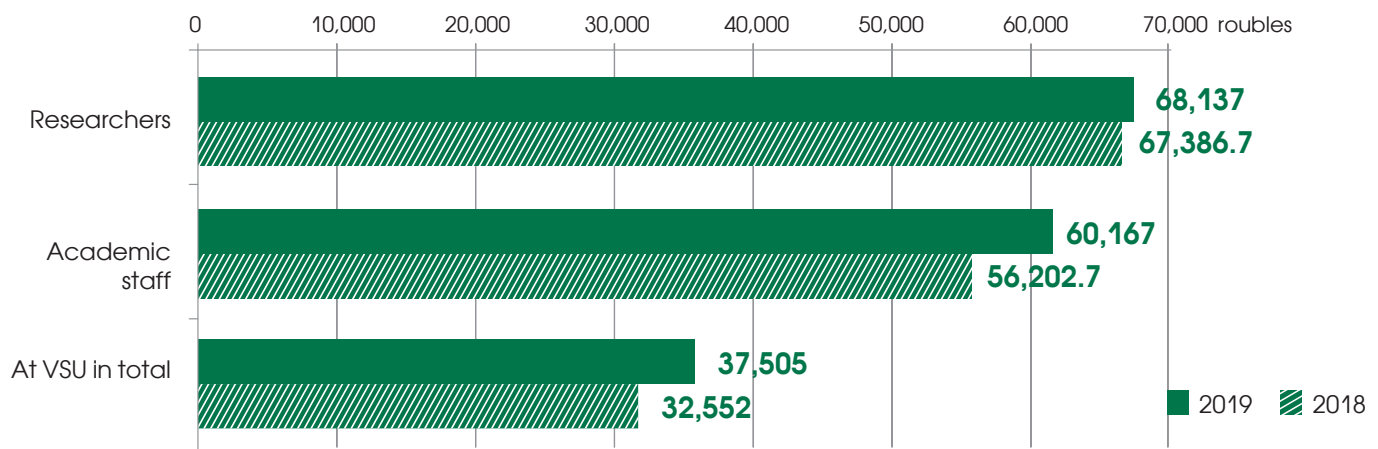
## 6.9. ANALYSIS OF THE AVERAGE SALARY AT VSU COMPARED TO THE AVERAGE SALARY IN THE VORONEZH REGION

In 2019, the average salary of university staff members (including payments from all sources) amounted to 37,505 roubles, including:

- For academic staff, 60,167 roubles, which is 209% of the average wage in the region and exceeds the target value of the roadmap for 2019, equal to 200%.
- For research workers, 68,137 roubles, which is 236.5% of the average wage in the region and significantly exceeded the target value of the roadmap for 2019, which was 200% (Figure 6.18).

Figure 6.18

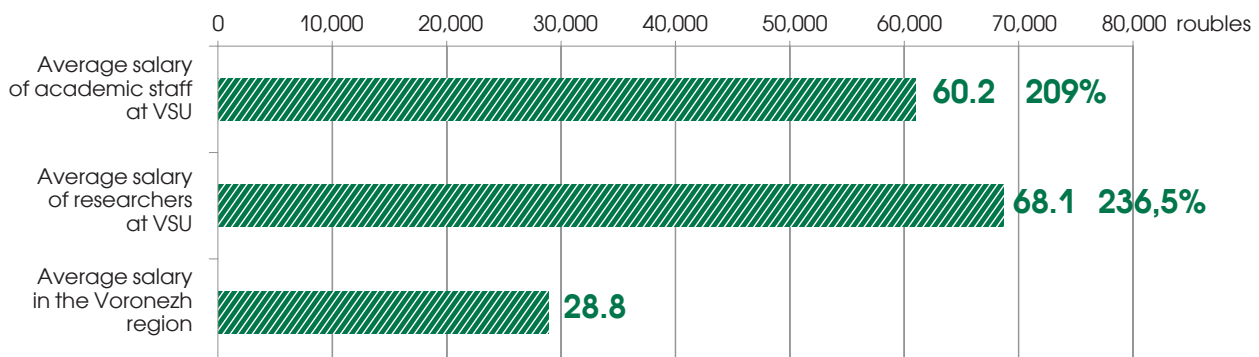
### AVERAGE SALARY IN 2018–2019

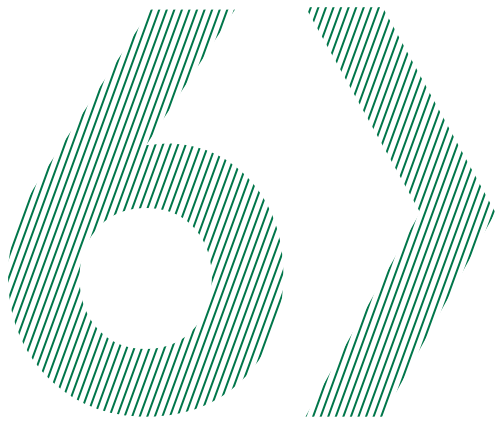


In 2019, the average salary of university staff members increased by 15.2%. The average salary of academic staff members increased by 7.1%, and researchers by 1.1% (Figure 6.19).

Figure 6.19

### AVERAGE SALARY OF ACADEMIC STAFF AND RESEARCHERS AT VORONEZH STATE UNIVERSITY AND THE AVERAGE SALARY IN THE VORONEZH REGION






## 6.10. BRIEF SUMMARY OF THE MAIN ACHIEVEMENTS IN 2019

### Financial and operating activities:

- Minimised costs in accordance with the university's strategy of finance management, budgeting, and planning of financial and business operations.
- Upgrading of university facilities using such additional sources of financing as subsidies and sponsored support, other revenue-generating activities.
- A change in the method of reporting information regarding revenue in accordance with the order of the Ministry of Finance of the Russian Federation No. 32n of 27.02.2018 - "Revenue".
- The minimization of expenditure by the university for the third year in a row led to a positive net operating financial result in the amount of 31,948 thousand roubles.
- Increased expenditure on purchasing property, plant, and equipment funded by all sources of financing.
- At the end of the year, the coefficient of depreciation amounted to 50.1%, almost at the level of the previous year, which had a positive impact on the technical condition of assets.
- The successful financial and business operations led to an increase in the current level of solvency.
- At the end of the reporting period, the university was able to discharge of its liabilities to the creditors in full through available funds.
- The improved financial stability for the third year in a row is due to the positive equity of the ratio of total assets.
- The period of settlements with debtors was 106 days.

### Purchase activities:

- The number of contracts signed decreased by 22.2%, due to the enlargement of the volume of purchases of goods, works, and services and the purchases based on the competitive selection of suppliers (contractors, agents) financed by subsidies obtained from the Russian Federation state budget resources, by grants, funds provided to fulfil state contracts, and as a result of other revenue-generating activities.

- 
- The volume of total financing for the purchasing goods, works and services increased by 90,306.44 thousand roubles, or 114.0%, the main sources of financing for the purchasing activities were grants, funds provided to fulfil contracts, as well as funds obtained from individuals and legal entities through other revenue-generating activities (72.71% of the total volume of purchases).
  - The number of contracts signed as a result of purchases from single supplier (contractor, agent) up to 300 thousand roubles, decreased to 41.35% of the total number of contracts signed, but remains the main method of selecting the supplier (contractor, agent).
  - The majority of expenses was related to contracts signed for the procurement of materials and payments for the teaching services of non-payroll employees to meet the needs of the university (17.86 and 32.01% of the total number of contracts signed for the procurement of goods, work, and services from a single supplier).
  - The number of modifications to the provisions of the time-schedule for purchases decreased by 4.35%, which confirmed the improved quality of planning of the university's purchase activities.
  - The specialists of the purchasing department took an active part in continuing advanced training classes for contractual system specialists as part of the programme in Purchase Management in the Contractual System for 108 hours at the VSU Business School (1 group was trained).

#### **Salaries and social welfare of the university staff:**

- The salaries of academic and research staff were kept at a level of not less than 200% of the average salary in the Voronezh region.
- In compliance with the law regarding the minimum wage (the minimum monthly wage in the Voronezh region increased to 12,130 roubles), a minimum salary was established instead of a salary at the level of the minimum monthly wage.
- The payment system for academic staff was changed as part of an effective contract by switching from lump sum payments to established monthly allowances. The amount of payments under an effective contract for academic staff was increased from 593.8 thousand roubles in 2018 up to 12,000.0 thousand roubles in 2019 (an increase by 20.2 times). The number of employees receiving this payment amounted to 824 people (in 2018 it was 140 people).
- In accordance with the regulations regarding the terms and conditions for rendering financial aid, as well as the regulations on social support of the single pensioners, 422 university employees received financial aid in the amount of 2,933,147.0 roubles.
- The tradition of providing bonuses for all categories of employees was continued.





# INTERNATIONAL ACTIVITIES





## INTERNATIONAL ACTIVITIES



**A. V. Akulshina,**

Head of the International  
Cooperation Department

### 7.1. VSU OBJECTIVES IN THE AREA OF INTERNATIONAL COOPERATION IN 2019

In 2019, VSU's international activities were focused on developing the following areas:

- To internationalise all areas of activities, from educational and research to administrative and organisational activities, and to engage all university staff into the process of internationalisation.
- To improve the university's standing in the international market for educational services.
- To enhance the academic mobility of academic staff, researchers, and students.
- To develop strategic partnerships with international universities.
- To create international network programmes.
- To develop and implement international educational and research projects.
- To increase the number of international students.



## 7.2. DEVELOPING CONTACTS THROUGH DIRECT CONTRACTS AND AGREEMENTS WITH INTERNATIONAL UNIVERSITIES

In 2019, within the framework of international agreements, VSU cooperated with 46 partner universities in the following areas:

- Participation of lecturers and students in scientific conferences, round table meetings, and master classes.
- Discussion of the development of educational and scientific cooperation.
- Academic exchange programs.
- Advanced training of academic staff.
- Implementation of joint education programmes.

VSU cooperated most actively with Martin Luther University (Germany, Halle), the University of Leon (Spain), Joanneum University of Applied Sciences (Austria, Graz), Georg August University of Göttingen (Germany), Zhejiang Sci-Tech University (China), Dokuz Eylül University (Turkey, Izmir).

In 2019, the list of VSU's partners was enlarged and new partnership agreements were signed.

1. Partnership agreement with the University of L'Aquila (Italy).
2. International partnership agreement with the University of Rouen (France).
3. Memorandum of understanding with the "Slavo-Serbia" Association.
4. Memorandum of understanding with Vietnam National University of Forestry (Vietnam).
5. Additional agreement to the partnership agreement with the Major Intercontinental School "SUP'MANAGEMENT" (Morocco).
6. Memorandum of understanding with Termez State University (Uzbekistan).
7. Partnership agreement with Tashkent State Pedagogical University named after Nizami (Uzbekistan).
8. Partnership agreement with Osh State University (Kyrgyzstan).
9. Partnership agreement with Kyrgyz-Russian Slavic University (Kyrgyzstan).
10. Partnership agreement with Bishkek Humanitarian University named after K. Karasaev (Kyrgyzstan).
11. Partnership agreement with Kyrgyz National University named after Jusup Balasagyn (Kyrgyzstan).
12. Partnership agreement with the Public Fund "Edinstvo" (Kyrgyzstan).



## ACADEMIC MOBILITY

- 196 lecturers, academic staff members, and 112 students took part in academic mobility programmes.
- 98 students from universities in Austria, Great Britain, Vietnam, Germany, Greece, Spain, Kyrgyzstan, China, Morocco, USA, Turkey, France, Estonia, and Japan studied at VSU through exchange programs.
- 29 foreign specialists were involved in the VSU academic process and research activities (Fig. 7.1, 7.2).
- 27 students and 19 staff members of the university received Erasmus+ scholarships to take part in academic mobility programmes. The total financing for mobility programs in 2019 amounted to 145,840 euro (10,208,800 roubles) (Fig. 7.1, 7.2).

Figure 7.1

### ACADEMIC MOBILITY OF LECTURERS AND EMPLOYEES

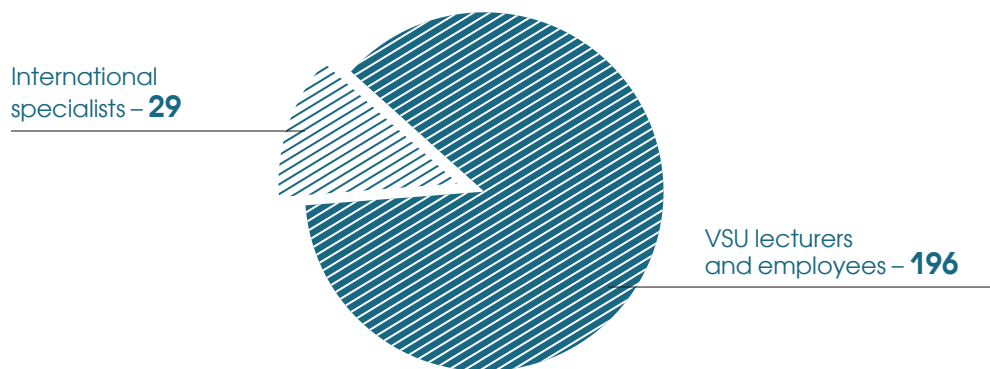
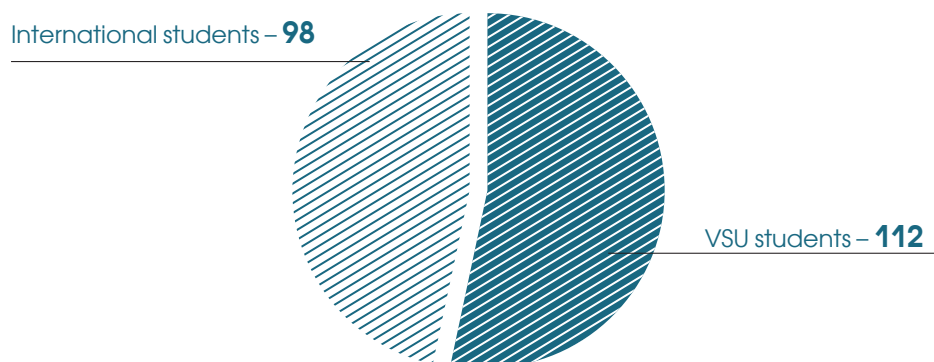


Figure 7.2

### ACADEMIC MOBILITY OF STUDENTS





Mobility is arranged most actively with the following universities:

- Martin Luther University (Germany, Halle)
- University of Leon (Spain)
- Joanneum University of Applied Sciences (Austria, Graz)
- University of Göttingen (Germany).

## INTERNATIONAL CONFERENCES

In the reporting period, 54 international conferences took place at VSU. Among the participants there were 430 international scientists and leading specialists from 18 countries: Armenia, Austria, Belarus, Belgium, Great Britain, Germany, Greece, Spain, Italy, Morocco, Portugal, Turkey, Finland, France, Sweden, Tajikistan, Kazakhstan, Ukraine (Table 7.1).

On 14 March, an official delegation of the Italian Republic headed by the Ambassador Extraordinary and Plenipotentiary of the Italian Republic to the Russian Federation, Pasquale Q. Terracciano, visited VSU. During the visit, agreements were reached regarding Italian students studying the Russian language at Voronezh State University and active support for education and cultural exchange programmes between the countries. As a result of further joint work, the Department of Romance Philology of the Faculty of Romance and Germanic Philology received funding.

On 27-31 March 2019, with the participation of VSU experts, the EU Study Week event was held in Voronezh. It was dedicated to pressing issues of the development of the European Union. EU Study Weeks is a cultural and educational project by the EU Delegation to Russia, which has been successfully operating for almost two decades. On March 29, in VSU, lectures were given and practical classes were held with 40 students from 15 Russian and European cities (Austria, Italy, France). On March 20, the University hosted the EU Delegation to Russia.

On 17 October 2019, the Ambassador of the European Union to the Russian Federation, Marcus Ederer, came to VSU. During the visit an Agreement was signed for the establishment of the Centre for the European Union Studies (EU Centre) at Voronezh State University.

The activities of the EU Centre are aimed at providing information and advice to students to expand their participation in EU educational programmes, providing advisory support to lecturers and scientists regarding participation in European research programmes, assisting in the development of training courses in relevant disciplines, and conducting European studies.

The EU Ambassador's visit coincided with the international scientific conference "Regional Strategies of International Security: Russia, the EU, and the Middle East" (16–17 October 2019), which was held within the framework of the Jean Monnet research network "War and Peace in European Security Challenges" and the Russian Foundation for Basic Research project.



On 13–16 November 2019, the Days of Sweden in Voronezh were held, during which the Ambassador Extraordinary and Plenipotentiary of Sweden to the Russian Federation, Malena Merd, paid a visit to the university. Members of the Swedish delegation held presentations and workshops.

On 28 November – 1 December 2019, VSU became a platform for the German-Russian media forum “Modern Journalism and Fact-Checking”, held with the support of the German Ministry of Foreign Affairs and Voronezh State University. The event was held as part of the Year of German-Russian Academic Partnership.

Table 7.1

#### THE NUMBER OF CONFERENCES AT VSU FACULTIES

VSU faculties	Number of conferences
Faculty of Economics	17
Faculty of Philology	6
Faculty of Geography, Geoecology, and Tourism	5
Faculty of Geology	3
Faculty of Mathematics	3
Faculty of Romance and Germanic Philology	3
Faculty of International Relations	3
Faculty of Physics	2
Faculty of Computer Sciences	2
Faculty of Biomedical Sciences	1
Faculty of Journalism	1
Faculty of Applied Mathematics, Informatics, and Mechanics	1
Faculty of Law	1
International Cooperation Department	3

### 7.3. INFORMATION REGARDING JOINT ACADEMIC PROGRAMMES (DOUBLE DEGREE PROGRAMMES) IN 2019

VSU continues its activities aimed at the introduction of education programmes developed in collaboration with international partner universities. In 2019, the university offered its students 8 joint programmes (Table 7.2).

Table 7.2

#### DOUBLE DEGREE PROGRAMMES AT VSU

No.	Name of the programme at VSU	Level of education	VSU subdivision	Partner university
1	Business in the Emerging Markets	Master's degree	Faculty of International Relations	Joanneum University of Applied Sciences (Graz, Austria)
2	Business Communication in Economics: the German Language	Master's degree	Faculty of Romance and Germanic Philology	Martin Luther University of Halle-Wittenberg, (Halle, Germany)
3	Optics and Nanophotonics	Master's degree	Faculty of Physics	University of Texas Rio Grande Valley
4	Mathematics; Mathematics and Computer Sciences	Master's degree	Faculty of Mathematics	University of Texas Rio Grande Valley
5	Russian Literature in the European Context	Master's degree	Faculty of Philology	University of Göttingen (Göttingen)
6	International Tourism Management	Master's degree	Faculty of Economics	University of Girona (Spain)
7	General Management	Master's degree	Business School	ISC Paris Business School
8	Tourism Management	Master's degree	Faculty of Geography, Geoecology, and Tourism; Faculty of International Relations; Faculty of Economics	Higher School of Tourism of Troyes (France)

The total number of students enrolled in joint programmes in 2019 was 47, the number of existing students was 61, and the number of graduates was 32 people.



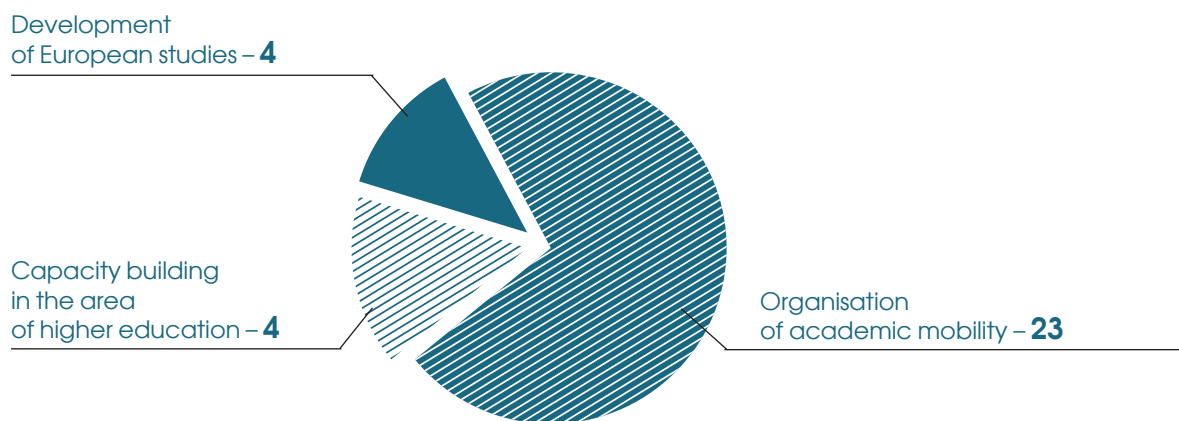
## 7.4. VSU'S PARTICIPATION IN COMPETITIONS FOR INTERNATIONAL FUNDS AND PROGRAMMES

An important area of the university's activities in 2019 was the development of international educational cooperation and academic mobility within the framework of international educational projects. VSU took part in the implementation of 31 Erasmus+ projects:

- 23 projects aimed at the organisation of academic mobility.
- 4 projects aimed at the capacity building in the area of higher education.
- 4 projects aimed at the development of European studies (fig. 7.3).

Figure 7.3

### ERASMUS+ PROJECTS IMPLEMENTED BY VSU





Projects aimed at the organisation of academic mobility with the following higher education institutions:

1. University of Girona, Spain (2017–2020).
2. Lille University, France (2015–2020).
3. Slovak University of Agriculture in Nitra, Slovakia (2017–2019).
4. Martin Luther University, Germany (2017–2020).
5. University of Debrecen, Hungary (2016–2020).
6. Lublin University of Technology, Poland (2016–2021).
7. Adam Mickiewicz University in Poznań, Poland (2017–2019).
8. University of Leon, Spain (2017–2019).
9. Polytechnic Institute of Tomar, Portugal (2017–2020).
10. University of Castilla-La Mancha, Spain (2015–2020).
11. Joanneum University of Applied Sciences, Austria (2017–2020).
12. University of West Attica, Athens, Greece (2017–2020).
13. University of Zagreb, Croatia (2017–2022).
14. Aristotle University of Thessaloniki, Greece (2017–2020).
15. University Paris-Est Marne-la-Vallée, France (2017–2021).
16. University of Cassino and Southern Lazio, Italy (2018–2021).
17. Danube University, Romania (2018–2020).
18. Ataturk University, Turkey (2017–2020).
19. Marmara University, Turkey (2017–2019).
20. Eskisehir Osmangazi University, Turkey (2019–2022).
21. Alexander Technological Educational Institute of Thessaloniki, Greece (2019–2022).
22. University of Granada, Spain (2019–2022).
23. Goce Delchev University, Macedonia (2019–2022).



The projects aimed at the building of capacity in the area of higher education:

- Internalisation of Electronic Engineering Master's Programmes in Russia and China – INSPIRE (2016–2019).
- ECVET Implementation in the National VET System of Russia and Uzbekistan – RUECVET (2016–2019).
- Capacity Building in Agriculture and the Cooperation between Urban and Rural Areas for Sustainable Development of Metropolises – TAURUS (2017–2020).
- Developing Master's Programmes in Mobile Applications and Game Design – MAGNUS (2018–2021).

Projects in the field of European studies:

- Research network: War and Peace in European Security Challenges – POWERS (2018–2021).
- Educational module: Migration in the European Union: Concerns and Prospects – EUMig (2016–2019).
- Educational module: Reducing the Shadow Economy: Adapting European Experience in Russia – SHEXP (2016–2019).
- Educational module: Refugee Law: Application of European Standards and Experience in Russia – EURexp (2017–2020).



## 7.5. INFORMATION ON THE INTERNATIONAL STUDENT POPULATION AND DYNAMICS

### Student population in 2018-2019:

- Bachelor's degree – 334 people (225 state-funded, 109 fee-paying)
- Master's degree – 113 people (68 state-funded, 45 fee-paying)
- Diploma degree – 61 people (31 state-funded, 30 fee-paying)
- PhD degree – 78 people (65 state-funded, 13 fee-paying)
- Pre-university training programmes – 161 people (62 state-funded, 99 fee-paying).

**Total: 747 people (451 state-funded, 296 fee-paying).**

### To see the dynamics, let us compare the data with the student population in 2017-2018:

- Bachelor's degree – 363 people (271 state-funded, 92 fee-paying)
- Master's degree – 106 people (58 state-funded, 48 fee-paying)
- Diploma degree – 45 people (27 state-funded, 18 fee-paying)
- PhD degree – 73 people (62 state-funded, 11 fee-paying)
- Pre-university training programmes – 171 people (80 state-funded, 91 fee-paying).

**Total: 758 people (498 state-funded, 260 fee-paying).**

In the 2018/19 academic year, 75 people were expelled.

### Graduated in 2019:

- Bachelor's degree students (100 people)
- Master's degree students (43 people)
- Diploma degree students (7 people).

**Total: 150 people (35 honours degree).**

### Enrolled in 2019:

- Basic level of education (3 people)
- Bachelor's degree students (299 people)
- Master's degree students (70 people)
- Diploma degree students (38 people)
- PhD students (17 people)
- Pre-university training programmes (523 people).

**Total: 950 people.**



In 2018, pre-university training of international students was carried out under further education programmes aimed at preparing foreign residents and stateless individuals for professional education programmes in the Russian language.

Total volume of the programme is 2376 academic hours, including no less than 612 academic hours of the further education programme aimed at learning the Russian language. It includes no less than 1008 academic hours of in-class work.

The curriculum for each programme is complex, it includes 5 training profiles: humanities, natural sciences, engineering and technology, medicine and biology, and economics. The further education programmes have 9 education programmes in the Russian language and general scientific disciplines.

Two further education programmes were developed: the Russian Language for Foreign Students (390 academic hours and 1170 academic hours) for students from foreign universities, coming to VSU faculties under exchange programmes. The curricula of the programmes include compulsory courses, linguistic and cultural elective courses, and linguistic elective courses.

Moreover, the International Education Institute designed the further training academic programme “Innovative Teaching Methods and Digital Education Technologies at the Pre-University Stage of Foreign Students Training”, which is optimised for 36 academic hours.

### **INFORMATION REGARDING E-LEARNING AIDS**

In 2019, the laboratory of new educational technologies of the Institute of International Education provided the Institute with e-learning aids that meet modern educational needs. The laboratory worked in two areas:

- Support for the classroom (contact) form of study with interactive multimedia teaching materials on PC in computer classes.
- Support for remote individual work of students with multimedia and test educational materials available from mobile devices (smartphones).

Interactive multimedia teaching materials (presentations, training sessions, and tests) for the contact form of study are based on the unique software products: “Interactive Library of the VSU Institute of International Education” and “Training and Testing System of the VSU Institute of International Education”.

In 2019, within the framework of the Interactive Library of the VSU Institute of International Education software system, the development of the interactive multimedia textbook “Russian cases” was completed. Within the framework of the Training and Testing System of the VSU Institute of International Education, open and closed-format electronic midterm examination tests for the course “Human Anatomy and Physiology” were developed (using regular expression technology).

In order to provide foreign students with access to materials for remote independent work, students of the Institute of International Education were connected to the VSU distance learning system “MOODLE”, test were designed for the courses “Russian cases” and “Russian history”.



Moreover, to reach the audience more fully and provide students with free access to educational materials, programmers and methodologists of the laboratory began developing a new project called “Mobile classroom of the Institute of International Education” (<http://interedu.vsu.ru/rvc/mobile/index.html>).

This online resource is located on the Institute of International Education website, it provides access to multimedia materials and audio supplements, study materials for different subjects. Currently, the “Mobile classroom of the Institute of International Education” is at the design stage, it is being supplied with the following materials for remote independent work of students:

- Audio supplements (texts read by speakers) to printed study materials on the Russian language, biology, chemistry, literature, and history.
- Audio materials for learning Russian as a foreign language, where the text read by the speaker is synchronised with the text on the screen (visually marked).
- Video lessons on grammar for learning Russian as a foreign language, with study process and video lecture by the teacher.
- Study films on different subjects.
- Guidebooks and printed textbooks.

#### **INFORMATION REGARDING COMMERCIAL EDUCATION AND TARGETED TRAINING OF STUDENTS IN VSU**

In May 2019, lecturers of the VSU Institute of International Education gave a course on the Russian language in the city of Jinan (Shandong province, People’s Republic of China) under the agreement with the Jinan School of Foreign Languages. The students showed a good command of Russian at a basic level. Some of them chose the “Journalism”, “Economics”, “Applied Informatics”, and “Medical Biochemistry” disciplines.

In September 2019, the first group of eight students began studying at the Institute of International Education.

#### **INFORMATION REGARDING INTERCULTURAL EVENTS**

The youth policy involved the following types of activities aimed at international students:

- Building a favourable environment for the balanced development of young people.
- Faster social, cultural, and academic adaptation.
- Learning more about Russia, its history, culture, and traditions.
- Participation in social, cultural, and sport life of VSU and the region.
- Holding large high-profile federal and regional events.



The list of intercultural events held by the Institute of International Education and with its participation in 2019:

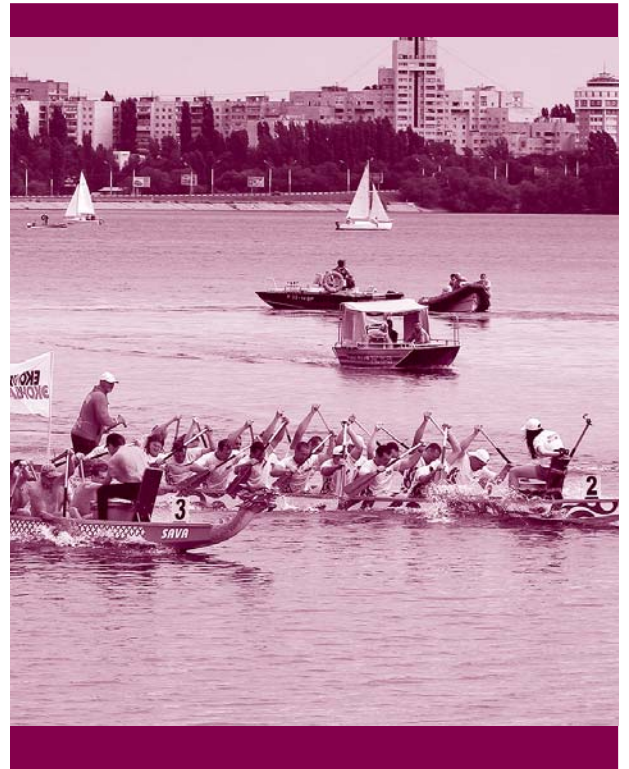
- 19th International Song and Dance Festival "Let's Join Hands" (in collaboration with the Department of Culture of the Voronezh Municipal Government).
- Participation in the international festival "Planet of Arts" (organised by the festival committee "City Life", Moscow).
- Participation in the international festival "Seventh Sky" (Semiluki).
- Participation in the international festival "So different, but so alike" (the administration of the Levoberezhny district of Voronezh).
- Participation in 5 cultural events in the international club "Sogdiana" (Voronezh).
- Participation in the festival of patriotic song "Defenders of the Fatherland" (the Department of Culture of the Voronezh Municipal Government).
- Charity visit to the orphan boarding school in Semiluki.
- Artistic contest "Miss Institute of International Education".
- Artistic contest "Mister Institute of International Education".
- A New Year party "Let's Get Acquainted".
- Final concert by the students of the pre-university training programme of the Institute of International Education.
- Graduation ceremony for VSU graduates.
- A trip to Khrenovoye stud farm.
- A trip to Moscow.
- A trip to Saint-Petersburg.
- A trip to Caucasus.
- 14 visits to museums.
- 16 visits to theatres, concert halls, philharmonic halls.
- 9 "friendship lessons" held at secondary education institutions of Voronezh.
- 34 performances at venues of the city.
- 2 international indoor soccer tournaments.
- 8 table tennis, chess, and volleyball tournaments.

## 7.6. BRIEF SUMMARY OF THE MAIN ACHIEVEMENTS IN 2019

- The total number of foreign students in all forms of study in the 2018/2019 academic year amounted to 747 people, in 2019, 950 foreign citizens were enrolled in various forms of education. The total number of students was 1340 people.
- The Russian Language for Foreign Students further education programmes (390 academic hours and 1170 academic hours) were developed for students from foreign universities, coming to VSU faculties under exchange programmes.
- The further training academic programme “Innovative Teaching Methods and Digital Education Technologies at the Pre-University Stage of Foreign Students Training” was created, which is optimised for 36 academic hours.
- A new project called “Mobile classroom of the Institute of International Education” is being developed (<http://interedu.vsu.ru/rvc/mobile/index.html>).
- As part of the youth policy, work with foreign students was carried out in the following areas: Building a favourable environment for the balanced development of young people; faster social, cultural, and academic adaptation; learning more about Russia, its history, culture, traditions; participation in social, cultural, and sport life of VSU and the region; holding large high-profile federal and regional events. In 2019, more than 100 events were held.
- An important area of the university’s activities in 2019 was the development of international educational cooperation and academic mobility within international educational projects. VSU took part in the implementation of 31 Erasmus+ projects.
- The academic mobility of lecturers, students, and scientists was carried out under 46 agreements with foreign higher education institutions, including 23 Erasmus+ projects, which allowed 196 lecturers, academic staff members, and 112 students to take part in academic mobility programmes.
- 8 education programmes, developed in cooperation with international partner universities, were implemented.
- 54 international scientific conferences were held, which were visited by 430 foreign scientists and leading specialists from 18 countries.
- On 17 October 2019, the Centre for the European Union Studies (EU Centre) was opened.

The university’s active internationalisation policy and its participation in European programmes provided it with a number of advantages:

- Improved the image of VSU on the national and international levels.
- A leading position in the region and in the country.
- Increased international awareness worldwide.
- Active introduction of modern teaching techniques.
- Implementation of modern programmes, including accredited double degree Bachelor’s and Master’s programmes.
- Establishment of new structural divisions to promote and support e-learning, ODL, and blended learning.





## 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 2019

Student affairs and social development are an integral part of the university's activities. Among the major goals and objectives are:

- To support the personal development and personal fulfilment of students and to provide them with opportunities to gain a wide spectrum of social and professional experience.
- To create the social and psychological conditions and social and cultural environment for development.
- To develop personal integrity among students and their commitment to the accepted behavioural norms; to shape the civic mindedness and patriotic consciousness of students.
- To improve the system for the adaptation of first year students to the academic lifestyle.
- To create an environment for the continued development of student creativity, to help organise their leisure activities, to introduce them to culture, amateur performances, and engage them in the university's creative teams.
- To form motivation for a healthy lifestyle among graduates, and to engage students in sports clubs.
- To implement a set of preventive measures to combat the spread of drugs, alcoholism, tobacco, and any manifestations of nationalism and extremism among students.
- To develop and enhance the activities of student self-governing bodies and volunteer, environmental, and construction brigades.
- To provide social security and psychological support to the university's students.
- To organise summer holidays for students and staff.



- To control the payment of bursaries and financial aid for students.
- To integrate foreign students in the social life of the university.
- To support student families.
- To develop social and career lifts.
- To develop project-oriented thinking among students in order to participate in grant competitions.

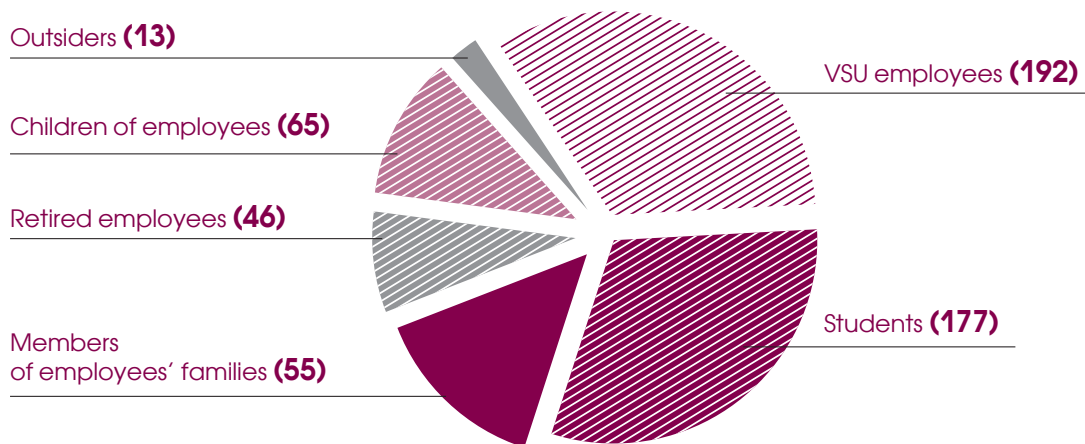
## 8.2. ORGANISATION OF SUMMER HOLIDAYS FOR VSU STUDENTS AND STAFF IN 2019

The Department for Social Development organised summer holidays and recreation for University staff members and students at the “Venevitinovo” sports and fitness complex.

In total, during the summer of 2019, 548 people went on holiday to the “Venevitinovo” recreation facility, including 192 VSU employees and 55 members of their families, 46 retired VSU employees, 65 children of VSU employees, 13 other visitors who paid the full price, and 177 students of the university.

Figure 8.1

### RECREATION AT THE “VENEVITINOVO” SPORT AND FITNESS COMPLEX



In summer 2019, 600 university students spent their holidays on the Black Sea coast (Rosa Khutor, the Republic of Crimea).



### **8.3. FINANCIAL AID FOR VSU STUDENTS AND STAFF IN 2019**

In 2019, based on the Regulations regarding the 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, 422 current and retired university employees received financial aid, which amounted to 2,933,147 roubles.

Importantly, the distribution and expenditure of monetary funds that affected the interests of students (scholarships and other bursaries, cultural events, sport, and recreation) was supervised by faculty scholarship committees and the trade union organisation of VSU students.

In 2019, the amount of money spent on financial aid to undergraduate and postgraduate students totalled 40,731,301.01 roubles.

### **8.4. STUDENTS' BURSARIES**

The administration of the university provides social support to both its employees and students. Based on the Regulations regarding Scholarships and Other Forms of Financial Aid for Undergraduate, Postgraduate, and Postdoctoral Students of Voronezh State University, the Social Development Department pursues a graded social policy with respect to VSU students in need of help.

To provide students with social support, the administration allocates bursaries to the following categories of students:

- Students who were orphans or those who were left without parental care in childhood.
- Disabled students of the first and second disability groups and disabled children under 18 years old.
- Students exposed to radioactive contamination as a consequence of the Chernobyl nuclear power plant accident and other radiological accidents (as per submitted documents).
- Students whose families are entitled to social support and with an average income below the poverty line.

In 2019, the sum of bursaries paid to 1,281 students totalled 27,436,942.78 roubles.

## 8.5. SUMMARY OF EVENTS OF THE SUBDIVISIONS OF THE JOINT STUDENTS' BOARD OF THE UNIVERSITY FOR 2019

Table 8.1

### EVENTS HELD BY THE SUBDIVISIONS OF THE JOINT STUDENTS' BOARD OF VSU

No.	Name	Number of Participants	Status	Date (2019)
1	Meeting and opening of the VSU Esports club	90	University	18 September
2	Dota2 Mix Cup	30	University	19 October
3	University Fun Cup Hearthstone	20	Between universities	2 November
4	Qualifying rounds for the All-Russia Cybersports Student League for Dota2, CS:Go, and Hearthstone	44	University	7 December
5	Battlefield Food Ration	40	Regional	9-10 May
6	Recruitment of new volunteers	40	University	30 September
7	Sweet Aid	20	University	19 November
8	Giving Tuesday	15	University	12 March
9	Chitai-Boltai	21	Municipal	13 December
10	Master class within the project "My History"	20	University	29 November
11	All-Russia memorial event "Blockade Bread"	30	National	27 January
12	Mountain search and rescue open competition, Krasnodar Territory	12	Interregional	7 March
13	Field medicine workshop	20	Intraclub	29 March
14	Meeting of the tourist club	58	Intraclub	3 April
15	Water tourism competition "Anninskie Mosty"	70	Regional	12 April
16	Rock climbing festival in the Vorgol rocks	22	Regional	20 April
17	Trip to the Vorgol rocks	20	Intraclub	17 May
18	Trip to the Vorgol rocks and the Elets rift	26	Intraclub	28 June
19	Trekking of the 1st category to Adygea	23	Intraclub	4 August
20	Newcomers meeting	27	Intraclub	11 September
21	Classroom lesson in the tourism school of the club	59	Intraclub	25-30 September
22	Autumn convention of members of the "Belaya Gora" tourism club + competitions	31	Municipal	12 October
23	Touristic Oktoberfest	23	Municipal	19-20 October
24	Final weekend trip of the hiking group	31	Intraclub	19-20 October
25	Multidiscipline tourism competition	30	Municipal	20 October
26	Classroom lesson in the tourism school of the club	23	Intraclub	18 November
27	Welcome Party	55	University	27 September
28	Language Tandem	51	Between universities	26 November
29	Literature and Music Evening	43	Between universities	11 June
30	International Cuisine	48	Between universities	16 November
31	International Casino	30	Between universities	29 November
32	Cinema Club	56	Between universities	12 July
33	Farewell Party	48	University	21 December
34	"Snow Landing" campaign	43	National	28 January – 1 February
35	Quest dedicated to the Day of the Russian Student Teams	122	University	17 February
36	Outreach festival of VSU student teams	6050	University	18-23 February
37	Mister and Miss of VSU student teams	80	University	6 March

Table cont. 8.1

No.	Name	Number of Participants	Status	Date (2019)
38	Student pedagogical teams' workshops	205	University	10 March – 22 May
39	Photo-cross	345	University	1 April
40	Kino-shot	120	University	11 April
41	Saturday voluntary clean-up	64	University	13 April
42	Camp Counsellors Olympiad among the student pedagogical teams of VSU	50	University	14 April
43	Outreach festival "Snow Landing"	2300	University	23 October
44	5th convention of VSU student teams	180	University	9-10 November
45	Open exhibitions of the student teams	80	University	21 November
46	Outreach campaign of VSU student teams	6080	University	9-13 December
47	"Guess the Tune" quiz	120	University	13 December
48	One-day Snow Landing event	21	University	25 December
49	Rally dedicated to the day of the liberation of Voronezh from the Nazi invaders	30	University	25 January
50	Opening of the "Snow Landing – 2019" campaign	40	Between universities	27 January
51	Closing ceremony of the "Snow Landing – 2019" patriotic event	80	Between universities	15 February
52	District School of Leaders of Student Team Headquarters of higher education institutions of the Central Federal District	8	Federal	6–7 April
53	Mister and Miss of Voronezh student teams	70	Between universities	24 April
54	Gala concert of the artistic festival of student teams of the Voronezh Region	100	Between universities	26 April
55	Artistic contest "Team Presentation"	100	Between universities	16 May
56	Opening of the third working semester of student teams of the Voronezh Region	110	Between universities	23 May
57	Graduation ceremony of the School of Camp Counsellors	180	Between universities	20 May
58	4th camping trip "RAMONTika"	150	Between universities	25-26 May
59	Convention of student teams of the Voronezh Region	100	Regional	28-29 September
60	4th national forum of student pedagogical teams	53	National	2-5 October
61	All-Russia Convention of Student Teams	30	National	25-27 October
62	Closing ceremony of the working semester	100	Regional	27 November
63	Voronezh Student Team School	30	Between universities	29 November – 1 December
64	Participation of the Legal Clinic in the X Forum of Legal Education	30	Between universities	17 October
65	First introductory lesson for candidates for the Clinic membership	27	University	22 October
66	First lesson of the "Legal Representation" training course	22	University	23 October
67	First lesson for the Law School participants	15	University	28 October
68	Second lesson of the "Legal Representation" course	22	University	9 November
69	Day of free legal assistance	10	Regional	20 November

End of table 8.1

No.	Name	Number of Participants	Status	Date (2019)
70	Second lesson "Basics of document management" for Clinic membership candidates	27	University	27 November
71	Law School workshop for schoolchildren on the topic "Labour rights of minors" and off-site consultation by the Legal Clinic	13	Municipal	23 December
72	Day of free legal assistance	2	Regional	1 February
73	Off-site meeting of students' boards of VSU faculties	150	University	11 May
74	Campaign dedicated to February 14	Approximately 800	University	14 February
75	Campaign dedicated to March 8	500	University	3 July
76	Collaboration with VSU creative teams	5000	University	20 March – 12 April
77	Help in achieving the "Ready for Labour and Defence" standards	500	University	16 May
78	From the ASSC student competition to the "Ready for Labour and Defence" badge of honour	15	Regional	20 April
79	Club tournament of Voronezh student sport clubs	100	Between universities	27 April
80	Interregional festival of children's recreation, leisure, and entertainment	70-100.	Regional	27 April
81	Board games tournament	50	University	25 May
82	Interfaculty competitions	80	University	23, 25 May
83	Beavers' trips	100	Regional	16, 23, 30 June, 7 July
84	Health lesson	150	Regional	3 August
85	Ravenous crossfit	50	Club	8 September, 2 November
86	"Piterskie Igrы"	6	National	16 October
87	"Svetobitva"	500	Between universities	15 November
88	Igroteka	60	Regional	6 December
89	Unght	600	University	14 December
90	Admission to the organisation	50	University	2 September
91	Giving Tuesday	15	University	12 March
92	Cyber Tournament	20	Between universities	30 October
93	All-Russia Student Tournament of Physicists	16	National	14 December
94	"Do not be Shy" contest	15	Regional	1 December
95	First Year Student festival	60	University	6 November
96	Joint Students' Board meeting with students	20	University	8 October
97	KoiNoYokan Fest	15	Municipal	21 August
98	Charity stand-up concert	10	Municipal	24 July
99	"Special Event" of the Joint Students' Board	600	University	26 May
100	Innovation League	10	University	24 May
101	Miss Physics	20	University	1 May
102	Students' Spring	60	University	22 April
103	"Art of Science" contest	20	University	14 April
104	ROBOART	25	Municipal	10 March
105	Admission to the organisation	40	University	26 February



## 8.6. OVERVIEW OF STUDENT COMPETITIONS

Table 8.2

### STUDENT COMPETITIONS

No.	Name	Number of Participants	Status	Date (2019)
1	Youth festival "All-Russia Students' Spring"	60	National	1-5 February
2	Festival of the central KVN (the Club of the Cheerful and Sharp-Witted) league "Start"	10	Regional	1 March
3	Lipetsk official KVN league "Universities" (1/8)	10	Regional	2 March
4	Creative meetings with the jury of the festival "University Spring"	150	University	3 March
5	140th anniversary of the Directorate of the Federal Penitentiary Service	25	Regional	15 March
6	University Spring	1700	University	20 March – 12 April
7	Recruitment, profession, and training vacancy fair	20	Regional	11 April
8	Festival of the central KVN league "Start" (1/8)	10	Regional	14 April
9	Youth festival "Students' Spring – Youth Creativity"	60	Between universities	16-21 April
10	VSU dance team participated in the "Inside dance festival" dancing competition	20	National	27 April
11	Miss Physics	30	University	30 April
12	Laying flowers in front of the monument of VSU employees and students	7	University	7 May
13	Youth festival "All-Russia Students' Spring"	34	National	14-19 May
14	International concert dedicated to Africa Day	50	University	25 May
15	Lipetsk official KVN league "Universities" (1/4)	10	Regional	8 June
16	Youth forum "Molgorod"	20	Regional	2–7 July
17	Internship at the "Leningrad Center"	2	National	10–20 September
18	Selection of dancers for the VSU dance team "TopRate"	50	University	12 September
19	Creative meeting with the stage director of the youth theatre, Vadim Krivosheev	60	University	14 September
20	KVN Summer Cup	10	Regional	15 September
21	Creative meeting about drama	60	University	18 September

End of table 8.2

No.	Name	Number of Participants	Status	Date (2019)
22	Creative meeting about comedy and theatrical skills	60	University	19 September
23	Creative meeting about video, mapping, and effects	60	University	5 October
24	Training session for subdivisions engaged in extracurricular activities	1	National	8-11 October
25	Creative meeting about humour	60	University	9 October
26	Creative meeting about make-up	60	University	11 October
27	Opening of the rehearsal room of the VSU dance team TopRate	40	University	15 October
28	Lipetsk official KVN league "Universities" (1/2)	10	Regional	19 October
29	First Year Student festival	1000	University	5-22 November
30	Introductory meeting of the heads of regional administrations of the Students' Spring	1	National	5-18 November
31	Charity concert "Giving Tuesday"	10	Regional	19 November
32	55th anniversary of Voronezh branch of All-Russia student teams	3	Regional	27 November
33	Development Pathway	30	Regional	28 November
34	VSU dance team participated in the Project 818 dancing competition	20	National	1-3 December
35	Lipetsk official KVN league "Universities" (final)	10	Regional	7 December
36	VSU dance team participated in the Dancewave 10 dancing competition	20	National	8 December
37	Young Teams' Cup	10	Regional	10 December
38	Creative meeting about directing and scriptwriting with the jury of the First Year Student festival	80	University	11 December
39	VSU dance team participated in the MOVING STAR DANCE CHAMPIONSHIP dancing competition	20	National	13-15 December
40	Festive session of the VSU Academic Board	30	University	27 December
41	New Year students' concert "Blue Light"	150	University	28 December



## **8.7. BRIEF OVERVIEW OF THE EVENTS HELD TO DEVELOP PATRIOTISM AND CIVIC POSITION**

### **25 January**

Mass meeting dedicated to the day of the liberation of Voronezh from the Nazi invaders.

### **7 February**

“Snow Landing” patriotic event, in which the Snow Landing team of VSU, “Grizzly”, took part (Kalach district).

### **8 May**

Memorial meeting dedicated to Victory Day.

### **21 May**

Quiz for schoolchildren “Immortal Act of Heroism”.

### **June 21**

All-Russia event “Tomorrow Was the War” (Chizhovka memorial).

### **June 22**

All-Russia campaign “Memorial Candle”.

### **June 22**

Mass meeting dedicated to the beginning of the Great Patriotic War.

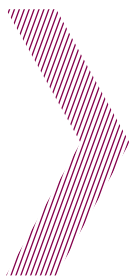
### **3 September**

Mass meeting dedicated to the anniversary of the terrorist attack in Beslan and the Day of Solidarity in the Fight against Terrorism.

### **6 September**

The Sergei Mosin Cup shooting competition.





## 8.8. SPORTS AND A HEALTHY LIFESTYLE

Physical culture and sport are an effective way to develop your body, 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 the large number of students. Annually, about 15 thousand students have a course of “Physical Culture and Sports”, 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 2019, 227 athletes with significant sport achievements entered the university: 3rd class – 46 students, 2nd class – 60 students, and 1st class – 63 students. Among them, there are 52 candidate masters of sports and 6 masters of sport of Russia.

The Department of Physical Education and Sports has sport clubs for 31 kinds of sports that are included in the programme of the Universiade between universities of the Voronezh region. Moreover, the university has sport clubs for sports that are not included in the programme of the Universiade: rhythmic gymnastics, shaping, aerobics, tourism, wushu, lawn tennis, military hand-to-hand combat, and aikido.

Overall, 830 students are members of sports clubs: 320 women and 510 men.

804 VSU students have sport categories and titles: 3rd class – 143 students, 2nd class – 249 students, and 1st class – 231 students. Among them, there are 161 candidate masters of sports, 18 masters of sport of Russia, and 2 international class masters of sport.



VSU students regularly represent their university at national competitions, such as "Russian Ski Track", "Nation's Cross-country Race", "Championship of the Russian ASSC", "All-Russian Student Marathon". They are prize-winners of the national student sports games "Ready for Labour and Defence" held among university students of the Voronezh region, they are champions of the sports programme "All-Russian Student Marathon" and the National Championship of the Russian ASSC among student sports club teams.

The sports club at the Department of Student Affairs and the Department of Physical Education and Sports hold many sport competitions every year. One of the key sport results for each faculty is the Universiade between faculties and the VSU First Year Students' Universiade. During the reporting period, the Universiade between faculties in 19 sports and the First Year Students' Universiade in 8 sports were held, the number of participants exceeded 2500 people.

Apart from sport competitions at VSU, VSU students take part in the Voronezh Universiade. In 2019, the VSU team took 2nd place. 1st place was taken by the team of Voronezh State Technical University. 3rd place was taken by the Voronezh State Institute of Physical Training. We should note that for the last ten years VSU has regularly taken 2nd place in the competition.

In 2019, the team from VSU took 18 prize-winning places in the Universiade among the universities of Voronezh: 4 first places, 3 second places, and 11 third places.

Since September 2019, the VSU team has took 1st place in the Universiade of Voronezh universities, 2nd place was taken by VSTU, and 3rd place was taken by Voronezh State Pedagogical University. The VSU team took 8 prize-winning places out of 9.

## 8.9. 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 main goal for the Centre of Inclusive Education at Voronezh State University is to create an environment that allows providing inclusive education opportunities to people with disabilities.

Records are kept of people with disabilities upon entering the university, during their training, and upon graduation (separately for each year and speciality). To provide a special environment for inclusive education, requests for special equipment required for the educational process, specialised adaptation academic programmes of higher education, and methodological support for the educational process are collected.

Currently, Voronezh State University has 124 students with disabilities. There are 5 students with hearing disabilities (no need for adaptive equipment), 13 students with visual disabilities (3 people who need adaptive equipment), 21 students with muscle-skeleton disorders (including 3 people who need adaptive equipment: 1 person who requires a wheelchair studies full-time at the Faculty of Computer Sciences, 1 person who requires a wheelchair studies part-time at the Faculty of Law, and 1 extramural form student who requires a wheelchair studies at the Faculty of Law), 85 people with no category.

The number of people with disabilities grows, so we should be ready to provide them with accessible education.

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, they have priority in receiving accommodation at student dormitories.

In 2019, students with disabilities regularly received bursaries and financial aid.

A social network group for disabled students of Voronezh State University was created (Inclusive Education Centre of FSFEI HE "VSU"), which currently includes 227 people. All relevant information regarding employment of disabled students, competitions, forums, etc., information regarding lump sum payments to students entitled to welfare benefits is published there. Every member of the group can send a message to its moderators to ask a question or arrange an individual appointment or consultation. The group files include all legal regulations of VSU regarding students entitled to welfare benefits.



During the whole year, the centre in cooperation with disabled students from VSU took an active part in organising and hosting the international inclusive project "1 + 1. Learning to Live Together". The goal of the project is to unite people with and without disabilities by means of joint activities, aimed at self-development and the development of society as a whole.

During the academic year, training seminars are held in order to give an insight into the psychological and physiological characteristics of students with disabilities, including those with health limitations, the specifics of admission, and the peculiarities of teaching students of various nosological groups.

Within the framework of the project "We are together", a traditional meeting of VSU students with representatives of the interregional association for the disabled "Apparel" was held. The goal of the meetings is to form a tolerant attitude to the disabled.

In June 2019, the regional hackfest "Digital Breakthrough 2019" was hosted by VSU. The head of the Inclusive Education Centre, together with the hackfest participants, developed new digital education opportunities for students with special needs.

Disabled students took part in the competition "On your Way to Your Career" organised by the Regional Educational Resource Centre "Accessible Environment", and participated in the Second All-Russia Student Project Competition "Professional Tomorrow". The main objectives of the competitions are to interest students with disabilities in their future profession, expand their horizons in the field of chosen vocational activity, stimulate further professional development and employment in the chosen field of training.

Together with the "Molodezhnyi" employment centre, with the support of the Voronezh Region Employment Department and the Department of Education, Science, and Youth Policy of the Voronezh Region, round tables and conferences involving VSU students with disabilities are held, which are dedicated to the problems of vocational education and the employment of people with disabilities.

Interaction with inclusive education space participants shows positive dynamics in the formation of a tolerant attitude towards people with disabilities, their inclusion in society.



## 8.10. MAIN ACHIEVEMENTS OF 2019

- The Voronezh State University delegation won first place at the youth festival “All-Russian Student Marathon”.
- First place in the festival “Students’ Spring – Youth Creativity” between universities and in the following nominations of the competition:
  - Nomination “comperе” – the laureate was “VSU’s artistic team”.
  - Nomination “music” – diploma won by “VSU’s Vocal Ensemble”.
  - Nomination “music” – diploma won by Yulia Larionova.
  - Nomination “dance” – the laureate was the Top Rate dance team.
  - Nomination “dance” – the laureate was the Top Rate dance team;
- The Voronezh State University delegation became a second-degree laureate in the nomination “Regional program” at the All-Russia Student Festival “Russian Students’ Spring”, with victories in the following nominations:
  - Nomination “Street dance” (small scale) – second-degree laureate.
  - Nomination “Street dance” (small scale) – first-degree laureate;
- The VSU team won the Cup of the Chizhov Gallery Centre in the sport version of the game “What? Where? When?”
- The VSU team won first place in the Open Basketball Festival 3 × 3 “Lords of the Rings”.





# FACILITIES OPERATIONS AND CONSTRUCTION



## FACILITIES OPERATIONS AND CONSTRUCTION



**A. A. Sokolov,**

Vice-Rector for Facilities  
and Capital Development

### 9.1. VSU MAJOR BUILDING OPERATION AND CONSTRUCTION GOALS FOR 2019

- To maintain and develop the university's property assets.
  - To maintain and operate facilities in accordance with the requirements of technical documentation, laws, and regulations of the Russian Federation.
  - To provide the infrastructure for educational activities, and to maintain the normal operation of utility systems: electricity, gas, heat, water supply, and the system for wastewater.
  - To create a safe learning environment, ensuring the health of students and employees, and to monitor compliance with industrial safety requirements in hazardous production areas.
- To render transport services to support educational, social, and business activities.





## 9.2. ACHIEVEMENT OF GOALS REGARDING THE MAINTENANCE AND THE DEVELOPMENT OF THE UNIVERSITY'S PROPERTY ASSETS

Due to insufficient funding for capital repair and maintenance of the university's property, at the expense of budgetary and extra-budgetary funds, the asphalt concrete covering of the internal territory of university buildings No. 6 and 10 was improved and restored. In addition, the heating system of the university's greenhouse was put into operation after repair, automatic entrance gates were installed at VSU's Botanical Garden, and the soft roof of university building No. 5a was partially repaired. The entrance of the university's swimming pool, residential facilities, and the canteen of the Venevitinovo sport and fitness complex, classrooms in buildings No. 1, 1b, 2, and 4, rooms in dormitories No. 3 and 7 for foreign students were repaired, works were carried out to comply with the requirements of supervisory authorities.

Based on the data from periodic inspections of the technical condition of the property assets, taking into account the significant number of requests from faculty deans and university staff for the repair of classrooms and housing, in this reporting year, specialists of the VSU Capital Construction and Production Technology Departments developed a repair plan for the current year and the subsequent (three-year) period. A large amount of work was carried out to prepare project documentation for all repair work for a three-year period, including capital repair of the canteen in building No. 2, repair of residential premises of the Nickel training base in the Republic of Adygea, capital repair of the premises of the ski lodge, the entrance of university building No. 8, the facade of the Faculty of Law, etc. The total amount is about 150 million roubles.

Therefore, the main priority of our work is to create appropriate conditions for educational activities and comfortable living conditions for students and teachers.



## LIST OF COMPLETED MAJOR AND MINOR REPAIR WORKS

At the expense of extra-budgetary funds, classrooms No. 132, 46a, and 301p with a total area of 59 m<sup>2</sup> in the main university building and university building No. 1b were repaired at a total cost of 278 thousand roubles; due to sponsorship of the university partners, classrooms No. 226, 15, 9, and 11 with a total area of 228.1 m<sup>2</sup> were also repaired.

Classrooms No. 102 and 103 with a total area of 38 m<sup>2</sup> in university building No. 2 were repaired, which totalled 233 thousand roubles of extra-budgetary funds. (Fig. 9.1).

Figure 9.1

### CLASSROOMS NO. 132 (UNIVERSITY BUILDING NO. 1B) AND NO. 103-104 (UNIVERSITY BUILDING NO. 2)



After major repairs, the canteen with a reconstructed large dining hall was opened in the main building of the university (Fig. 9.2).

Figure 9.2

### THE CANTEN WITH A RECONSTRUCTED LARGE DINING HALL





At the expense of extra-budgetary funds, classroom No. 223 with an area of 18 m<sup>2</sup> in university building No. 4 was repaired at a cost of 64 thousand roubles. (Fig. 9.3).

Figure 9.3

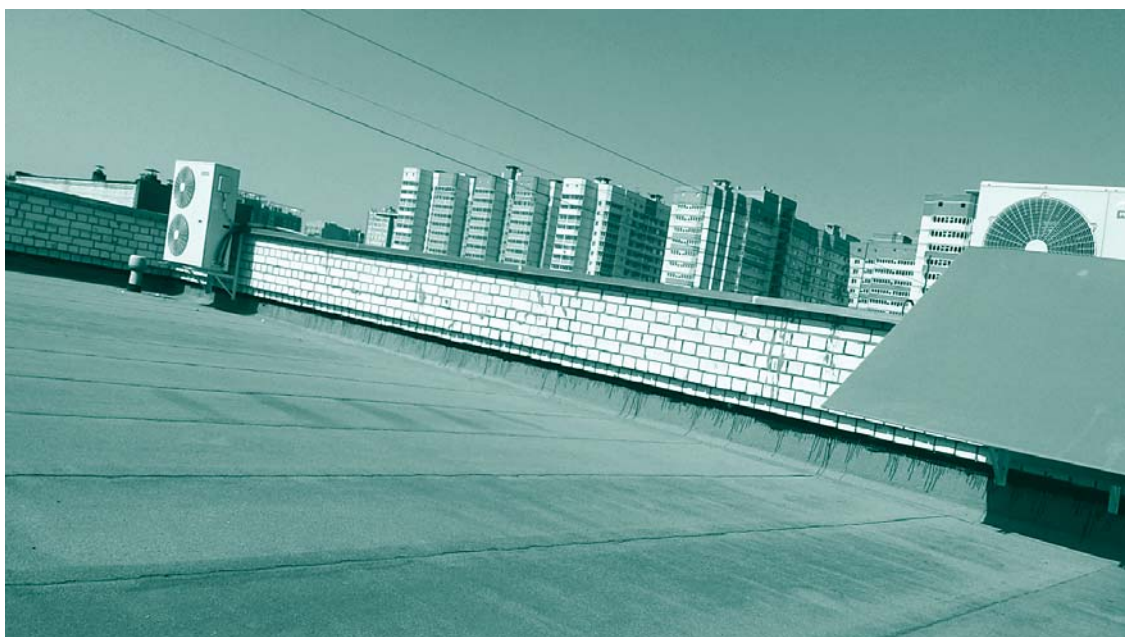
#### CLASSROOM NO. 223 (UNIVERSITY BUILDING NO. 4)



In university building No. 5a, the roof was partially repaired, including the replacement of rainwater heads. The repaired area was 445 m<sup>2</sup> (total area of the roof is 2302 m<sup>2</sup>), which totalled 508 thousand roubles of extra-budgetary funds. (Fig. 9.4).

Figure 9.4

#### THE ROOF OF UNIVERSITY BUILDING NO. 5A



Carried out at the expense of extra-budgetary funds, the repairs to the entrance and the access ramp of the swimming pool, with an area of 52 m<sup>2</sup>, including the replacement of floor tiles, totalled 158 thousand roubles. (Fig. 9.5).

Figure 9.5

### THE ENTRANCE TO THE VSU SWIMMING POOL



In the VSU Botanical Garden, the heating system of a greenhouse with tropical plants with an area of 269 m<sup>2</sup> was restored and automatic entrance gates with a wicket door were installed, with a total cost of 359 thousand roubles. (Fig. 9.6).

Figure 9.6

### RESTORATION OF THE GREENHOUSE WITH TROPICAL PLANTS AND REPAIR OF THE ENTRANCE GATES





At the Venevitinovo sport and fitness recreation complex, at the expense of budgetary funds, redecoration of the living rooms was carried out, the wiring and plumbing in the canteen were renovated, shower rooms were repaired with replacement of wall and floor tiling, a metal roof with an area of 84 m<sup>2</sup> was painted, which totalled 673 thousand roubles.

At the expense of budgetary funds, dorm room No. 611 in dormitory No. 7 with an area of 25.5 m<sup>2</sup> was repaired. Its window was replaced, new lighting fixtures were fitted, the walls and floors were levelled and painted, and the floor was covered with linoleum, with a total cost of 76 thousand roubles.

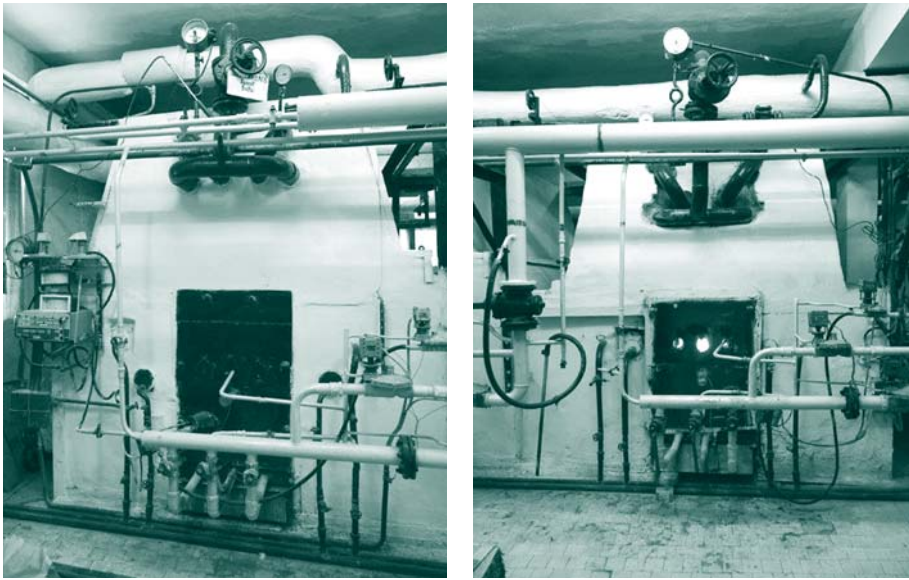
In total, at the expense of budgetary funds, facilities with a total area of 2209.2 m<sup>2</sup> were repaired with a cost of 749 thousand roubles, and 1109.1 m<sup>2</sup> were repaired at the expense of extra-budgetary funds, with a cost of 1600 thousand roubles.

In 2019, the Facilities Department carried out the repair of premises with an area of 1671.2 m<sup>2</sup>, including 52.2 m<sup>2</sup> in dormitory No. 3 (two rooms); 174 m<sup>2</sup> in dormitory No. 7 (nine rooms); in the main building: ceramic plating of the porch of entrance No. 3 - 9 m<sup>2</sup>, painting of the canteen hall - 240 m<sup>2</sup>, painting of the hall walls - 650 m<sup>2</sup>, painting of the metal fencing, curb - 312 m<sup>2</sup>; in university building No. 1a: repair of the walls where plastic windows were fitted (75 pcs) - 35 m<sup>2</sup>; in university building No. 3: painting of the benches and curb - 200 m<sup>2</sup>, in room No. 205: repair of the linoleum floor covering - 35 m<sup>2</sup>; in university building No. 10: painting of the metal fencing - 94 m<sup>2</sup>; in the garage of the Transportation Department: repair of the ceiling and walls in the premises with an area of 110 m<sup>2</sup>. The Facilities Department bought materials and protective gear at a cost of 761.8 thousand roubles, 12 boiler sections for the boiling room in the main university building at a cost of 487.6 thousand roubles from extra-budgetary sources.

A significant amount of work was carried out using our own resources: to prepare boiler room No. 1 for the 2019–2020 heating season, to repair the cast-iron sectional boilers “Minsk 1” (3 pcs) and steel boilers KTS1 (2 pcs). Boiler refractory lining was disassembled and dismantled, cast-iron sections, side screens, boiler fixture, gas bottom burners, cast-iron sectional screens were fitted, gas burners in steel boilers were replaced, the boilers were hydraulically tested after assembling, a new refractory brick lining was assembled, it was covered with plaster, whitewashed, boiler fixture was installed, which amounted to 163.7 thousand roubles. (Fig. 9.7).

Figure 9.7

## TWO OF FIVE BOILERS IN THE BOILING ROOM AFTER REPAIR



A significant amount of work was performed related to the repair of heating systems in the university buildings, the cleaning of sewage pipes in the main building and in university buildings No. 2, 4, 8, and 10. In accordance with technical regulation, hydraulic and pneumatic tests of pipelines were performed, including the cleaning of the internal heating systems and the units of university buildings (acts of readiness for heating period were issued and approved).

Following the energy saving programme, the university used its own resources to conduct electrical works to replace lamps with energy saving LED lamps, 324 pcs in total.

Electrical works included the maintaining of substations of substations, testing and measurement of the university's power units, repair of power cable of the central heating station (capital construction) and ski lodge, installation of protective grounding of residential houses in the Venevitinovo sport and fitness complex, residential trailers of the Nickel training base in the Republic of Adygea, and the administrative building in the Galichya Gora nature reserve, as well as installation of lighting in the basement of university building No. 6 for a total of 790.7 thousand roubles.

The maintenance department of the Facilities Department was responsible for the production and installation of window sills, door and window units, mouldings, tables, metallic racks, containers for solid domestic waste; glass cutting, and pattern cutting of laminated particle boards, repair of panels in halls, electric heaters; the rotary mechanism of turnstiles, closers, gutters for water drainage from the roof; production of bucket linkage for a garage tractor; manufacture and installation of canopies over entrance doors, air conditioners, and window openings, welding to produce metal stairs for access to the roof and a protective metal fence with a handrail for safe lifting of metal grating membranes, repair of entrance steps, entrance gates, sewers, metal frames of chairs, armchairs, benches, and tables, as well as loading and unloading.



### 9.3. OVERVIEW OF WORK PERFORMED BY THE TRANSPORTATION DEPARTMENT

A significant amount of work was performed by staff members of the Transportation Department (Table 9.1).

Transport was ensured for student summer practices in the Voronezh, Lipetsk, Kursk, Tambov, Rostov regions, the Republic of Crimea, and the Republic of Adygea, the Krasnodar and Stavropol territories.

Table 9.1

#### TRANSPORTATION

No.	Work item	2018	2019
1	Transportation for conferences (pcs)	16	21
2	Number of passengers (people)	904,00	914,000
3	Cargo turnover (tonnes)	58.7	68.4
4	Distance driven (thousand km)	141.6	183.8
5	Fuel consumption (l):		
5.1	– A-95 petrol	20,236	20,106
5.2	– A-92 petrol	13,240	14,135
5.3	– diesel fuel	25,195	28,040
5.4	– liquefied gas	2800	2900



## 9.4. MAJOR REPAIRS AND MAINTENANCE FINANCING BY SOURCE OF FUNDING

Figure 9.8

SITES FINANCED IN 2019

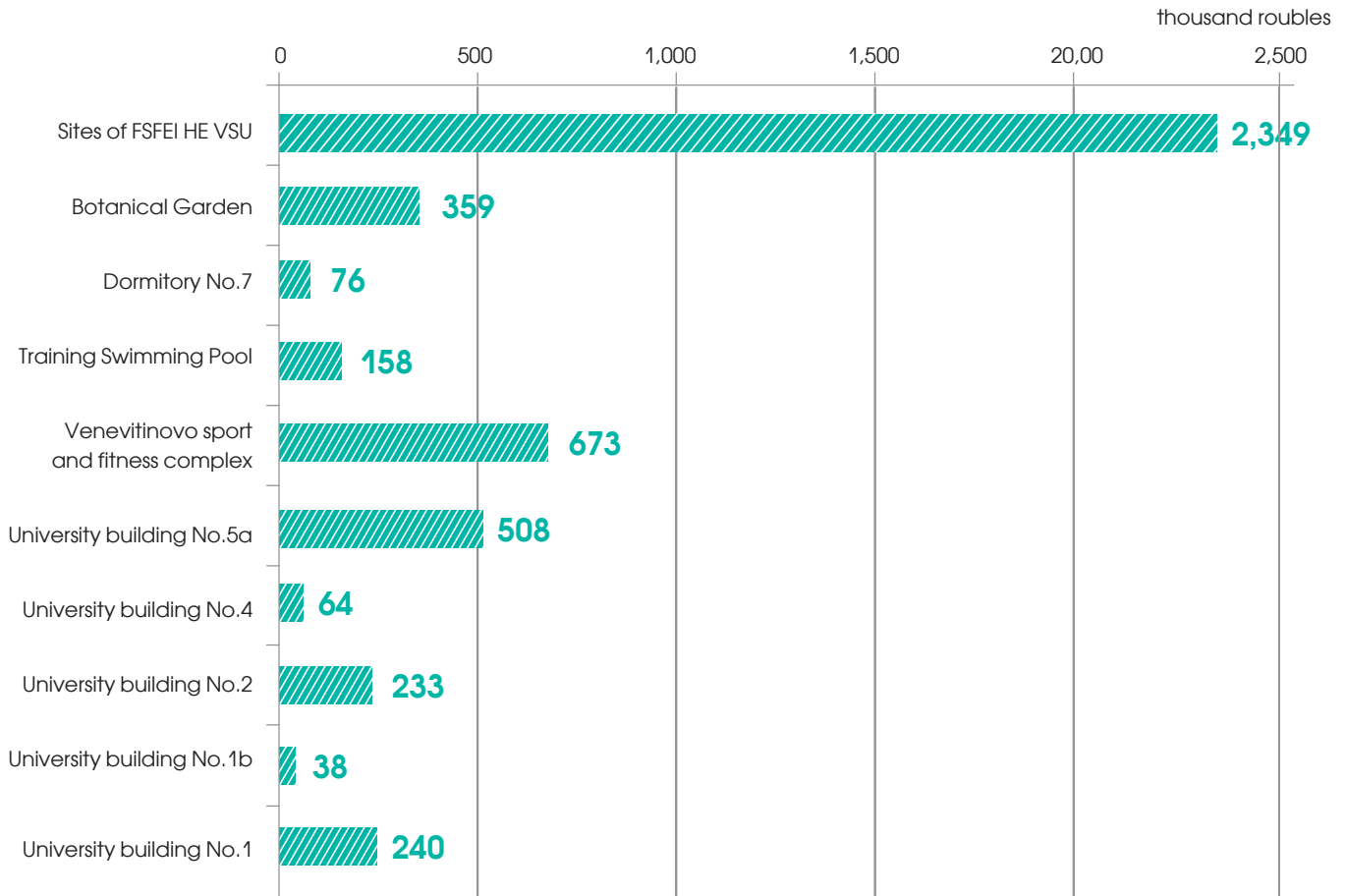


Figure 9.9

FINANCIAL STRUCTURE OF REPAIR AND MAINTENANCE WORKS IN 2018 AND 2019, MILLION ROUBLES

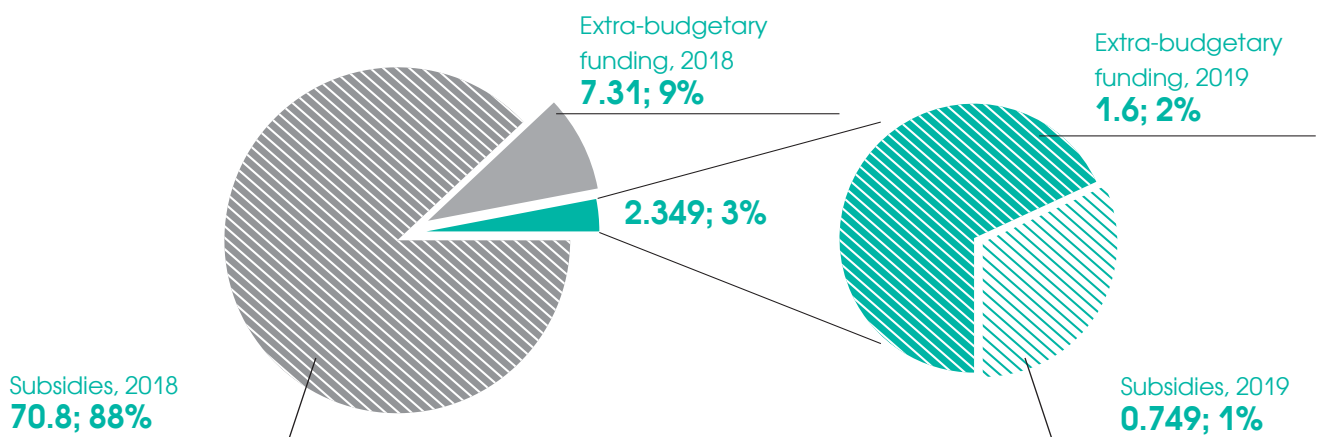


Figure 9.10

STRUCTURE OF EXPENDITURE ON UTILITY BILLS IN 2018 AND 2019 IN ROUBLES

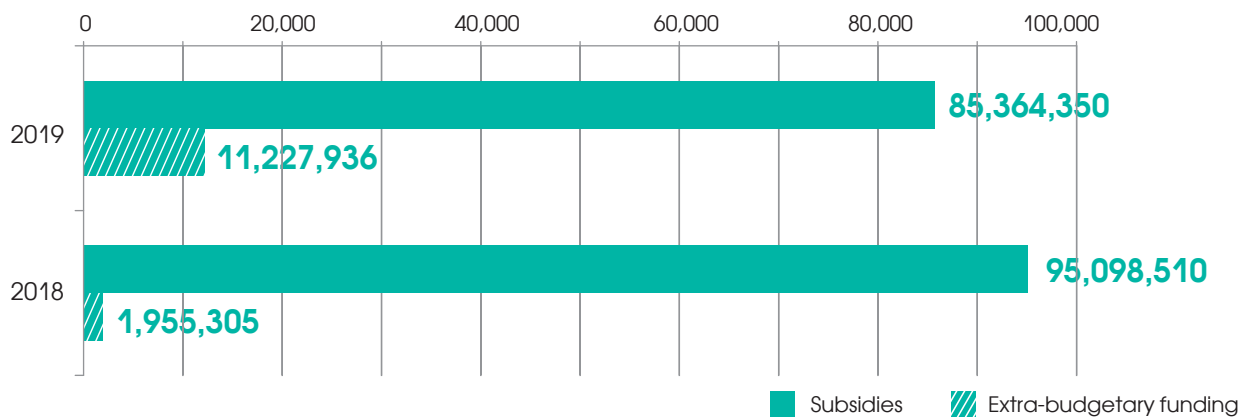


Table 9.2

VOLUME AND COST OF CONSUMED RESOURCES IN ROUBLES

Type of energy resource	2017		2018		2019	
	Volume	Amount	Volume	Amount	Volume	Amount
Electrical energy	7,681,938 kWh	41,288,498	7,628,809 kWh	43,210,851	7,142,981 kWh	43,534,728
Natural gas	1,406.732 thousand m <sup>3</sup>	9,202,395	1,661.104 thousand m <sup>3</sup>	11,408,795	1,621.839 thousand m <sup>3</sup>	11,415,825
Heat supply, including hot water	15,854 Gcal	25,949,931	16,913 Gcal	29,391,143	16,226 Gcal	29,347,472
Water, water discharge	303,146 m <sup>3</sup>	11,341,376	304,398 m <sup>3</sup>	13,043,026	286,407 m <sup>3</sup>	12,294,261
	335,735 m <sup>3</sup>		337,750 m <sup>3</sup>		324,284 m <sup>3</sup>	
<b>Total</b>		<b>87,782,200</b>		<b>97,053,815</b>		<b>96,592,286</b>

9.5. MAIN RESULTS OF THE ACTIVITIES IN 2019

Based on the data from periodic inspections of the technical condition of the property assets, taking into account a significant number of requests from faculty deans and university staff responsible for the repair of classrooms and housing, in the reporting year, specialists of the VSU Capital Construction and Production Technology Departments developed a plan of repair work for the current year and the subsequent (three-year) period. A significant amount of work was carried out to inspect, compile defect statements, and prepare project documentation for all repair work for a three-year perspective for a total amount of about 150 million rubles.

Budgetary and extra-budgetary funds, as well as sponsored financing by the university’s partners, allocated for the repair of property assets, were used as efficiently as possible.

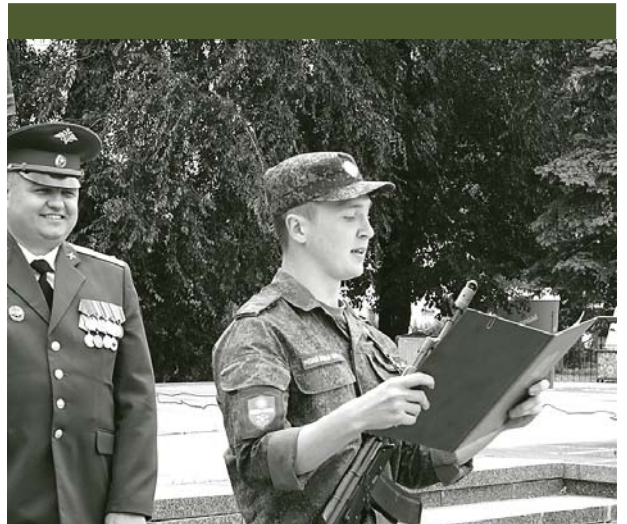
The energy saving and energy efficiency programme for buildings, facilities, and equipment of the university was continued.

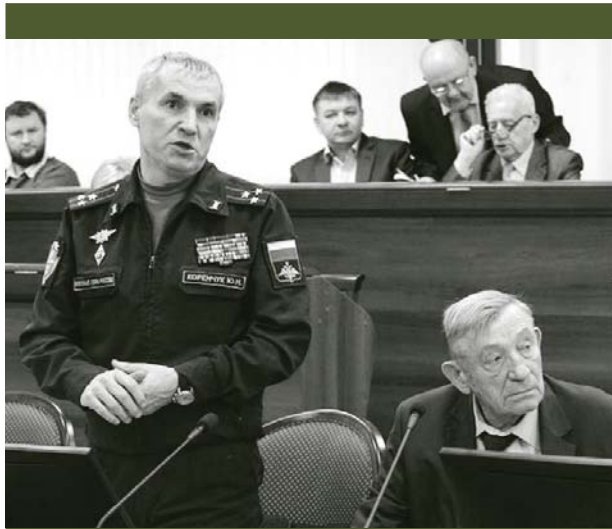
All works were conducted with due consideration of the programme for creating an accessible environment for physically challenged people.

Engineering services ensured the non-stop operation of all technical systems and the necessary life support parameters for buildings, structures, and premises throughout the reporting year.

## 9.6. OVERVIEW OF PROMISING PROJECTS IN THE AREA OF DEVELOPMENT OF PROPERTY ASSETS IN 2020

- To organise the design of a new 16,345 m<sup>2</sup> dormitory for 836 students on the territory located at 42a Kholzunov St.
- To design a multifunctional sports stadium with open-air stands and auxiliary rooms on the territory located at 42a Kholzunov St.
- To begin designing a new energy efficient gas boiler-house (main university building).
- To prepare design documentation for the repair of facades of university buildings No. 3 and 4, the Inclusive Education Centre in accordance with the requirements of the Directorate for the Protection of Cultural Heritage.
- To continue necessary works aimed at improving the fire safety infrastructure and enhancing the energy efficiency of VSU buildings and facilities.
- To finish repairs to the facade of university building No. 9. To install aesthetic lighting around university buildings No. 1 and No. 9.
- To continue the reconstruction of buildings and facilities in the "Galichya Gora" nature reserve and to finish reconstruction of the "Visitor Centre".
- To finish restoration and repairs in the storage facilities for training military equipment at the Faculty of Military Education so they can be used.
- To prepare the buildings and facilities of the Venevitinovo recreation facility for the summer season of 2020.
- To prepare project documentation and to carry out the capital repair of the "Ski Lodge" sports complex and to connect it to the heating network of the branch of PAO "Kvadra".
- To make major repairs to the library premises.
- To perform major renovation of the canteen in building No. 2.
- To ensure the power supply and commissioning of the ventilation system, installation of a fire alarm and capital repairs of ventilation and lighting of the attic of the canteen of the main building.
- To prepare project documentation for major repairs to the building of dormitory No. 1.
- Phased implementation of the concept of reconstruction and improvement of the Botanical Garden (72.32 ha).
- In view of the dangerous condition of the building, to perform major repairs to the roof and premises of university building No. 7 (the project was completed in 2017).





# MILITARY EDUCATION AT VSU



## MILITARY EDUCATION AT VSU



**Yu. N. Korenchuk,**  
Colonel, Head of the Military  
Training Centre

### 10.1. OBJECTIVES IN THE FIELD OF MILITARY EDUCATION IN 2019

- Implementation of the military education programme for military service under contract in military occupational specialities for reserve officers.
- Implementation of educational programmes in military occupational specialities for reserve officers.
- Implementation of educational programmes in military occupational specialities for reserve sergeants..

On 26 June 2018, the State Duma passed the Federal Law "On Introducing Amendments to Certain Legislative Acts of the Russian Federation Regarding Enhancement of Military Training of Students in Federal State Educational Institutions of Higher Education" which abolished the terms "reserve officer training department" and "training military centre" from 2019 and the term "military training centre" was introduced.

Based on the Government of the Russian Federation Executive Order of 13/03/2019 No. 427-r "On Military Training Centres in the Federal State Educational Institutions of Higher Education", a military training centre (MTC) was created at Voronezh State University.

The "Regulation on military training centres in the Federal State Educational Institutions of Higher Education" was approved by the Decree of the Russian Government of 3/07/2019 No. 848.



In order to properly implement the regulatory legal acts, a huge amount of work has been done for the creation of a new staff list and the organizational structure of the MTC.

The rector approved the staff list for the MTC, which was put into effect on September 1, 2019.

The Commander in Chief of the Ground Forces approved the organizational structure of the MTC at Voronezh State University.

The work on the selection and placement of academic staff members in accordance with the new staff list was performed.

Until September 1, 2019, the Faculty of Military Education of the Voronezh State University consisted of two structural subdivisions: a Military Training Centre, where officers were trained for military service under contract, and the Military Department, where officers and sergeants were trained for the reserves.

On September 1, 2019, the Faculty of Military Education of the Voronezh State University was disbanded and the Military Training Centre consisting of four departments was created.

1. The Department of Missile Forces and Artillery, where officers are trained to serve under the contract (for three military occupational specialities), as well as training reserve officers (for three military occupational specialities) and reserve sergeants (for three military occupational specialities) for the missile forces and artillery of the Armed Forces of Russia.
2. The Department of Special Training, where officers are being trained to serve under the contract for the Main Personnel Directorate of the Ministry of Defence of the Russian Federation for two military occupational specialities.
3. The Department of Humanitarian Training, where officers are trained to serve under contract for three military occupational specialities: "Information Support Organisation" - for the Department of Media Affairs and Information of the Ministry of Defence of the Russian Federation; "Psychological and Moral support of Forces", full-time mission - deputy commander for military-political work - for the Main Military-Political Directorate of the Armed Forces of the Russian Federation; "Linguistic Support of Military Activities" - for the Federal Security Service of the Russian Federation.
4. The Department of General Military Training conducts classes on general military topics in all departments.

A military veteran, a knight of the "Order of Courage" and holder of two medals of the Order of Merit for the Motherland with swords, Colonel Y. N. Korenchuk, was appointed as the head of MTC and was elected as a member of the University Academic Council of Voronezh State University.

# 10

## **10.2. INFORMATION ON MILITARY OCCUPATIONAL SPECIALITIES IMPLEMENTED AT THE MILITARY TRAINING CENTRE**

### **In the field of training and graduation of citizens studying at the MTC:**

- The implementation of a military training program for the students, organisation of the training period ending with the Military Oath Ceremony for the fourth-year students.
- Organisation of the final assessment of citizens who completed the training period and internships.
- Organisation of the assessment for the graduates to affiliate them to the commissioned staff for further military service under contract.
- Award ceremony for graduates where they receive their epaulettes, officer's identification certificates, and identity numbers.
- Preparation of orders for the assignment of military ranks to graduates for reserve "lieutenants" and "sergeants".
- Internships for students with the military speciality "Information Support Organisation" (Faculty of Journalism, speciality "War Journalism"), at the Department of Media Affairs and Information.

### **In the field of preparation for new admissions at the MTC:**

- Conducting promotional activities to attract applicants for admission to the Military Training Centre (with further service under contract) and students to undergo training in training programs for reserve officers and sergeants.
- Revision of the educational process documentation with its further approval by the partners.
- Conducting an admission campaign at the MTC.
- Enrolment of applicants and students who have successfully passed the competitive selection.



Table 10.1

INFORMATION ON THE MILITARY OCCUPATIONAL SPECIALITIES IMPLEMENTED BY THE MTC IN 2019

No.	Military speciality	Number of students	
		Personnel	Reserve
1	Linguistic Support of Military Activities	20	-
2	Military Units and Anti-Tank Artillery Warfare	93	-
3	Military Units and Ground Artillery Warfare	20	73
4	Anti-Tank Guided Missile (ATGM) Warfare	108	93
5	Mortar Warfare	59	68
6	IT Support of Military Activities	29	-
7	Information and Psychological Support of Military Activities	37	-
8	Information Support Organisation	28	-
9	Psychological and Moral support of Forces	8	-
10	Artillery Commander	-	74
11	Anti-Tank Artillery Crew Chief	-	-
12	ATGM Commander	-	70
13	Mortar Detachment Commander	-	65



### 10.3. A BRIEF REPORT ON THE ACTIVITIES OF THE MILITARY TRAINING CENTRE FOR THE TRAINING OF OFFICERS TO SERVE UNDER CONTRACT

- In accordance with the order of the commander of the western military district troops No. 903 dated October 22, 2018, military internships were held with the troops of the western military district from February 25 to March 26, 2019, primarily with Troop Unit 2394 (Belgorod) and Troop Unit 31969 (Tambov);
- In the period from June 24 to July 7, 2019, training camps were held at Troop Unit 31895 (Voronezh) and Troop Unit 31969 (Tambov), which ended with the giving of military oaths.

The students were admitted to the Military Training Centre by the order of the rector after they had passed a military medical examination, psychological tests, fitness tests, and had signed the contract with the university. The list of military occupational specialities is given in Table 10.2.

Table 10.2

#### ADMISSION TO THE MILITARY TRAINING CENTRE IN 2019 TO PREPARE OFFICERS FOR SERVICE UNDER CONTRACT

Military Speciality	Major (speciality)	Number of students
Military Units and Mortar Warfare	38.05.01 – Economic Security	20
Anti-Tank Guided Missile (ATGM) Warfare	10.05.04 – Information Analysis Security Systems	20
Military Units and Ground Artillery Warfare	10.05.01 – Computer Security	20
Information and Psychological Support of Military Activities	45.05.01 – Translation and Translation Studies	10
IT Support and Military Activities	10.05.01 – Computer Security	10
Information Support Organisation	56.05.05 - War Journalism	12
<b>Total</b>		<b>92</b>

## 10.4. A BRIEF REPORT ON THE TRAINING OF RESERVE OFFICERS (SERGEANTS) AT THE MILITARY TRAINING CENTRE

In accordance with the orders of the commander of the western military district troops No. 903 of October 22, 2018 and No. 972dsp of November 17, 2018 "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 2019" training camps were held at military unit 91727 (Boguchar) ending with the military oath ceremony. The number of students who completed their training period amounted to 154.

68 graduates of the University were allotted service numbers and awarded the military rank of the reserve officer by the Order of the Ministry of Defence of the Russian Federation.

In 2019, 648 applications were submitted to the Main Missile and Artillery Directorate, 144 students were accepted. The competition for places was 4.5 people per place.

Table 10.3

### IMPLEMENTATION OF THE NON-COMMISSIONED OFFICER (SERGEANT) TRAINING PROGRAMME

No.	Military Speciality	Trained, people		
		2nd year	3rd year	4th year
1	Anti-Tank Guided Missile (ATGM) Warfare	24	45	36
2	Military Units and Ground Artillery Warfare	24	45	22
3	Military Unit and Mortar Warfare	48	48	45
4	Artillery Commander	36	36	33
5	ATGM Commander	36	33	33
6	Mortar Detachment Commander	-	35	33



## 10.5. EVENTS AND MEETINGS HELD BY THE VSU ADMINISTRATION AND THE FACULTY OF MILITARY EDUCATION IN ORDER DEVELOP THE VSU MILITARY TRAINING SYSTEM

- The rector of Voronezh State University, Professor D. A. Endovitsky, took part in militarypatriotic events: laying wreaths in honour of Victory Day, the trooping of the colours, and in honour of the presentation of officer epaulettes of graduates of the MTC.
- The rector of Voronezh State University, Professor D. A. Endovitsky, personally participated in all stages of the reform of military education in civilian universities, and the development of the legal framework for reform.
- At the invitation of the main personnel department of the Ministry of Defence of Russian Federation, the rector of VSU, Professor D. A. Endovitsky, took part in a meeting at the Katanov State University of Khakassia, held by Russian Minister of Defence S. K. Shoigu on improving military education in civilian universities.

Among the topics discussed was the military training of females in civilian universities. Females will not be able to study in all military specialities. S. K. Shoigu set the task of “determining what professions are available for females.”

The rector of Voronezh State University, Professor D. A. Endovitsky, supported what was said by the Minister of Defence and suggested that females could, for example, take such specialities as Psychology of Employment Activities, War Journalism, and Military Translation.

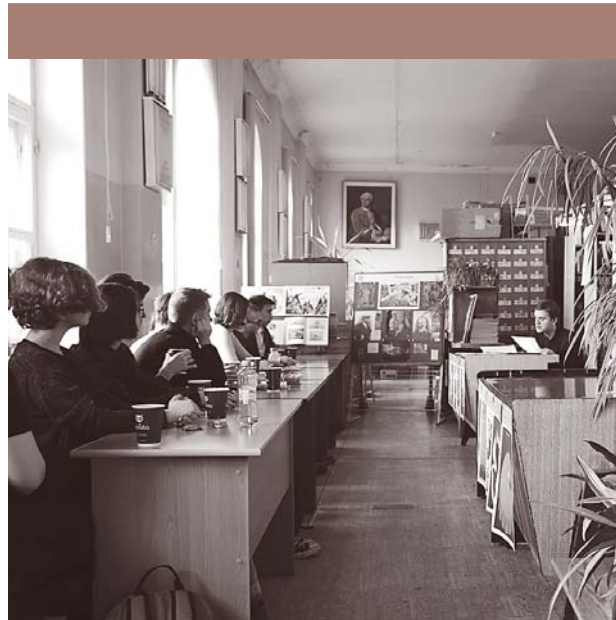
- Work continued to expand the list of specialities and types of military training for students. The rector of Voronezh State University, Professor D. A. Endovitsky, sent a letter in September 2019 to the head of the Main Personnel Directorate of the Ministry of Defence of the Russian Federation, Deputy Head of the General Staff of the Ministry of Defence of the Russian Federation, Vice Admiral I. O. Kostyukov with a request to introduce the training of reserve officers in two military specialty occupations in the interests of the military training centre at the Voronezh State University. On the initiative of Colonel Yu. N. Korenchuk, the head of the Military Training Centre at Voronezh State University, our university was visited by a representative of the Main Personnel Directorate of the General Staff, who became acquainted with the educational facilities and the teaching staff of the specialist training department. A motivational and assertive decision was made, which the head of the Main Personnel Directorate of the General Staff of the Ministry of Defence of the Russian Federation will inform the rector about.
- Under the leadership of the rector of Voronezh State University, Professor D. A. Endovitsky, a team from the MTC at Voronezh State University developed a draft study guide “Political-Military Work” which is to be sent to the Deputy Minister of Defence of the Russian Federation, Head of the Main Military-Political Directorate of the Armed Forces of the Russian Federation, Colonel-General A. V. Kartapolov for review and approval. The comments and suggestions from the Main Military-Political Directorate of the Armed Forces of the Russian Federation indicate that this project “is the first modern publication devoted to the issues of the organization of citizens and students in military training centres at civilian higher educational institutions according to the training programs for officers, sergeants (sergeant majors), soldiers (sailors) of reserves and personnel, professional competencies in the field of military-political work with subordinate personnel.”

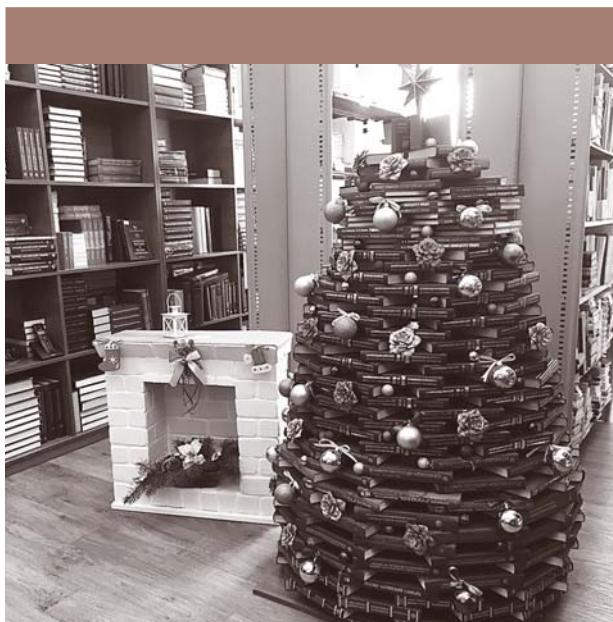


The rector of Voronezh State University, Professor D. A. Endovitsky, head of the MTC at the Voronezh State University, Colonel Yu. N. Korenchuk, and assistant to the rector for military education, professor of the Department of General Military Training at the Military Training Centre of Voronezh State University, V. G. Shamaev, took part in the Second All-Russian Scientific and Practical Conference, held 19–20 December 2019 at the Ural Federal University named after the First President of Russia B. N. Yeltsin (Yekaterinburg), with a report “Military-patriotic education as an integral part of military education in a civilian university” (Section No. 2 - Features of the organization of educational work with students undergoing military training in higher educational institutions). The report has been published.

## 10.6. SUMMARY OF KEY ACHIEVEMENTS IN 2019

- A military training centre at the Voronezh State University was established.
- For the first time in the 93 year history of military education at Voronezh State University, four departments have been created that carry out student military training programs.
- By order of the rector, a head of the Military Training Centre at Voronezh State University was appointed.
- An open space with classes was commissioned for the practical study of artillery.
- A clear system of military education in a civilian university has been developed:
  - 2 years - training of reserve sergeants.
  - 2.5 years - training of reserve officers.
  - 5 years - training of commissioned officers.
- The university was the only one in the region where the planned training of reserve sergeants was introduced.
- Quotas for the training of professional officers for 2020 have been received and approved.
- New military occupational specialities have been introduced at the MTC in order to train reserve officers, which will lead to an increase in recruitment by 66%.
- A set of documents is being developed for newly introduced military occupational specialities:
  - 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.





**VSU REGIONAL  
SCIENTIFIC LIBRARY**





## VSU REGIONAL SCIENTIFIC LIBRARY



**A. Yu. Minakov,**  
Director of the VSU Regional  
Scientific Library

The Regional Scientific Library of Voronezh State University (hereinafter – the library) 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. The library provides methodological assistance and consultations to regional university libraries and organises advanced training courses for their staff. The library has created an accessible environment for disabled visitors. In 2019, it rendered library and information services managing a universal multi-purpose collection of Russian and foreign books and documents on physical media, diligently preserving this collection for future generations. It also provided access to local and remote information resources online. The full list of services can be found on the library's website: [www.lib.vsu.ru](http://www.lib.vsu.ru). The services are provided in full compliance with the ISO international standards.

As of 1 November 2019, the unified library collection of Voronezh State University was comprised of 3,168,374 items in various languages. The collection was completed with the sources necessary for all education and scientific programmes implemented at VSU according to the Thematic and Typological Acquisition Plan: [www.lib.vsu.ru/Преподавателям](http://www.lib.vsu.ru/Преподавателям). The education materials meet 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. Some documents were donated to the collection. In 2019, the library collection was enlarged by 16,881 items. On average, the collection contains about 119 items per subscriber. The collection increased by a ratio of 0.5, and the study books collection ratio increased by 0.8. The majority of items in the collection are books, journals, scientific and educational literature (Fig. 11.1-11.4).





Figure 11.1

COLLECTION STRUCTURE ACCORDING TO THE TYPES OF ITEMS  
(3,168,374 ITEMS AS OF 1 NOVEMBER)

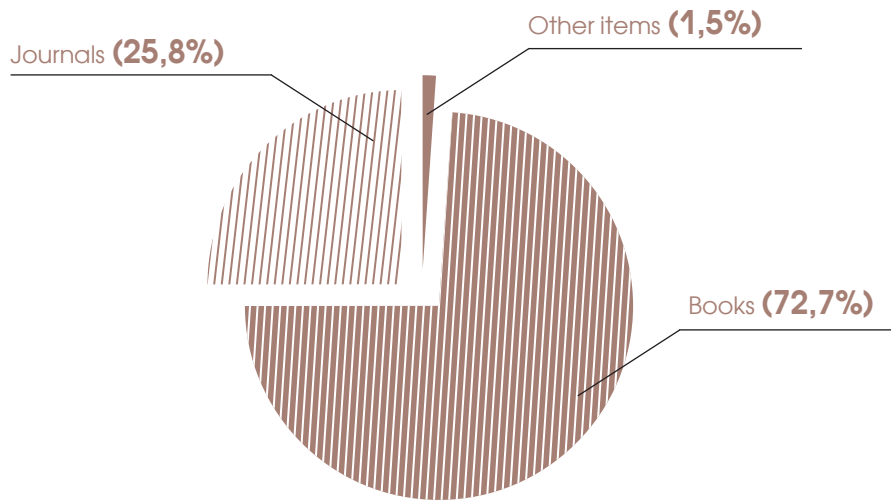


Figure 11.2

COLLECTION STRUCTURE ACCORDING TO THE PURPOSE OF ITEMS  
(3,168,374 ITEMS ON PHYSICAL MEDIA AS OF 1 NOVEMBER)

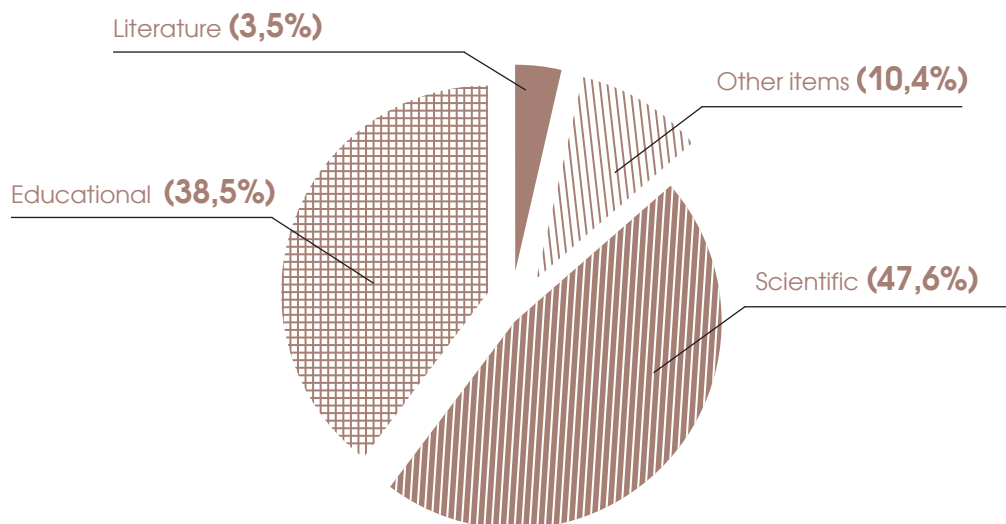




Figure 11.3

### NUMBER OF NEW ITEMS IN THE COLLECTION

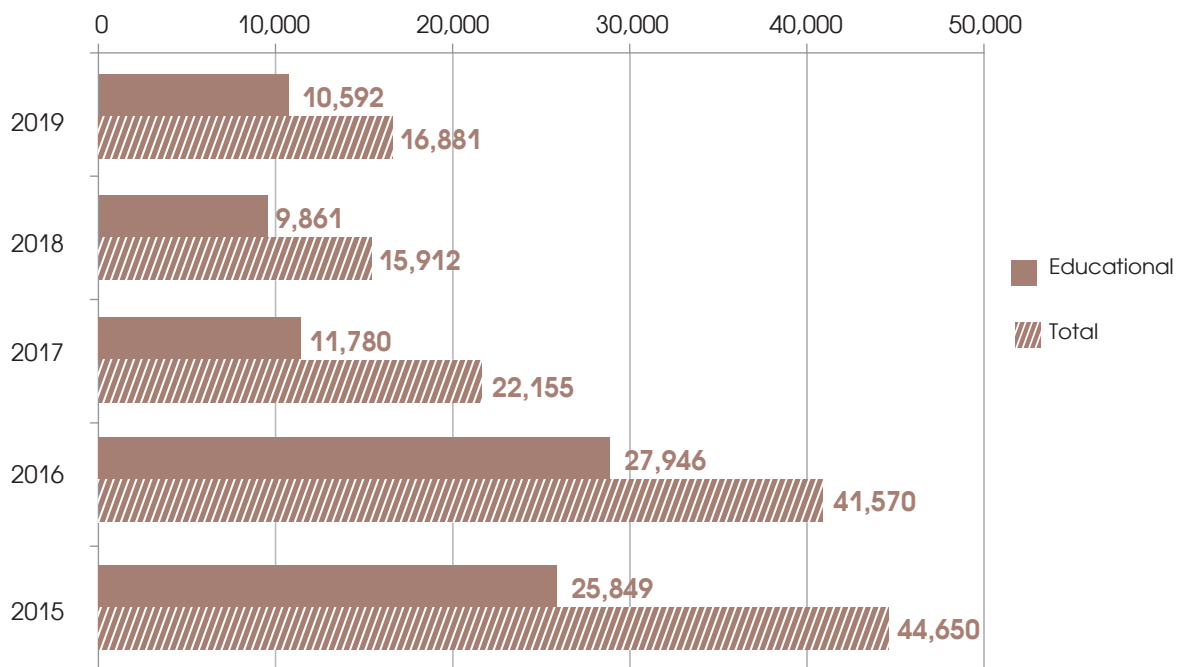
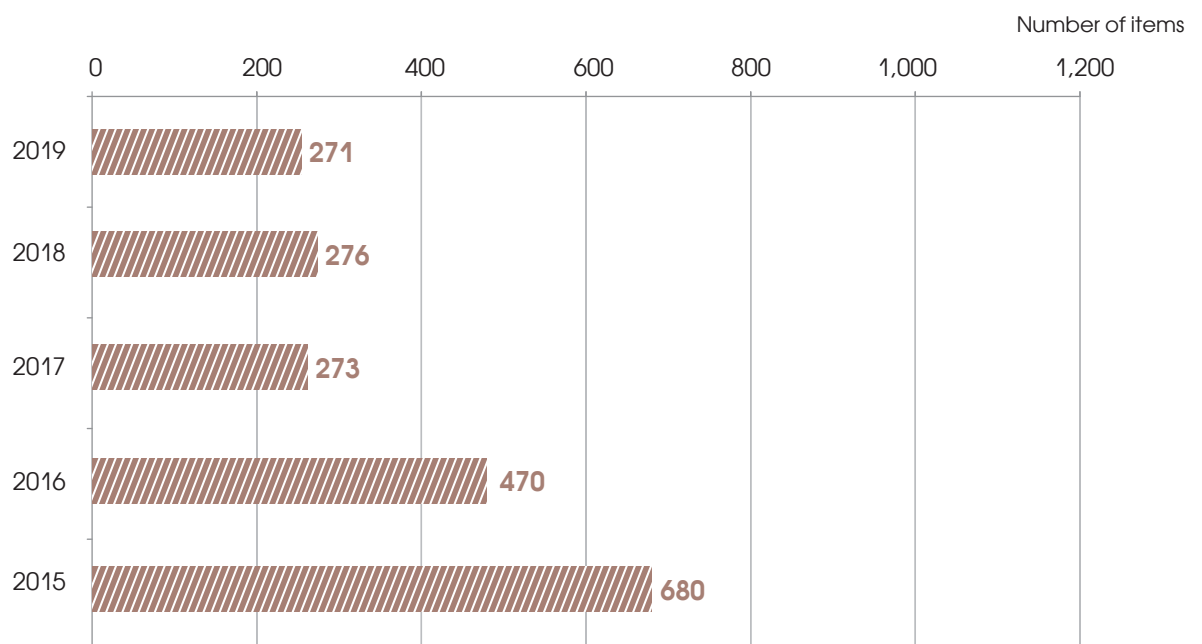


Figure 11.4

### NUMBER OF NEW SUBSCRIPTION PERIODICALS IN THE COLLECTION



Moreover, in 2019, library subscribers were able to gain remote access to 2,409,284 items. To achieve this, the library provided access via coordinated national subscription to the databases provided by the Oxford Russia fund (e-library MyiLibrary). In addition, library subscribers were able to use such e-library systems as "University Library Online", "Student Assist", "Lan Publishing", "IPRbooks", and "Urait". The library continues to manage the VSU collection at the National digital resource Rucont (<http://rucont.ru>), as well as the full-text database "VSU E-Library".

The acquisition expenses amounted to 7,051,586 roubles 21 kopecks.

The library's collection of rare documents includes about 100,000 items. It consists of unique Russian and foreign editions from the XVI–XXI centuries, represented by manuscripts, books, and periodicals.

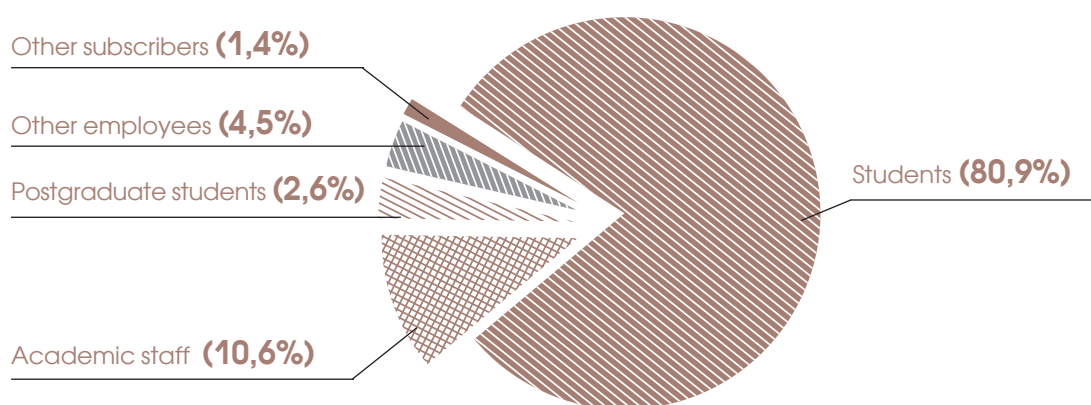
The library maintains its e-catalogue, which provides information about the items in the collection, and can be found on the library website. As of 1 December 2019, the catalogue contained 1,047,110 entries.

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 2019, the index included 211,419 entries. To improve the university's academic and scientific rating, the library provides access to the Web of Science and SCOPUS databases and uploads the information about the VSU staff publications to the eLIBRARY database. As of 28 December 2019, the University was ranked the 20th among Russian universities by such an essential bibliometric parameter as the number of publications.

In 2019, there were 26,548 entries in the unified registration catalogue of the library subscribers (Figure 11.5). Altogether, the library provided its services to 84,394 subscribers. 79,576 subscribers were served remotely.

Figure 11.5

#### COMPOSITION OF THE LIBRARY SUBSCRIBERS IN 2019



In 2019, library subscribers were given access to 597,944 items on physical media, whereas the number of items read online amounted to 104.966.





# THE "GALICHYA GORA" NATURE RESERVE





## THE “GALICHYA GORA” NATURE RESERVE

### PROGRESS REPORT FOR 2019



**N. Ya. Skolznev,**

Director of the “Galichya Gora”  
nature reserve

The research department of the “Galichya Gora” nature reserve currently includes four laboratories, collection funds (the Herbarium of the Middle Russian Hills and Contiguous Territories, the Mycological Herbarium Reserve and the Collection of Invertebrates Reserve), and a meteorological station. In 2019, research projects were carried out by eight full-time specialists in accordance with the approved research program and plans.

The reserve’s staff continued to monitor the state and dynamics of the natural habitats. Such monitoring has been carried out continually since 1974. Materials for the 46th volume of “Nature records of the nature reserve “Galichya Gora”” have been collected and are being processed.

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 nine subtopics covering the main biota taxons of the area: fungi, plants, invertebrate, and vertebrate animals.

The reserve collections have been enriched.

As a result of the research conducted in 2019, the staff published the following works:

- 1 monograph (5.0 printed sheets)
- 1 collection of research papers (7.0 printed sheets)
- 69 scientific articles, of which, 7 papers were published in the leading journals included in the list of referenced scholarly journals recommended by the State Commission for Academic Degrees and Titles of the Russian Federation, 17 papers were published in journals indexed by the Russian Science Citation Index, 1 was published in a journal indexed by Web of Science, and 1 was published in a journal indexed by Scopus.



The researchers took part in 7 international and federal conferences with 12 reports.

They also received one patent from the Russian Federation.

The most important results of the work performed in 2019 include:

- Taking part in preparation of The Red Book of the Voronezh Region (The Red Book of the Voronezh Region: in two volumes. Voronezh: Spiritual Revival Centre of the Black Earth Region).
- Assistance in shooting a film about the "Galichya Gora" nature reserve by the national television channel Zoo TV.

In 2019, experts affiliated with the Institute of Soil Studies of the Russian Academy of Sciences and the Institute of Forest Studies 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, various Russian universities and state reserves, as well as the Department for Nature Conservation of Forestland of the Saxenforst state enterprise and Senckenberg Natural History Museum visited "Galichya Gora" in order to perform both individual and collaborative research.

In 1990, the nursery for carnivorous bird registered in The Red Book of the Russian Federation, was founded. More than 400 saker falcons were released into the wild. Most eyas are bought by falconry lovers from Russia and abroad. The reserve also functions as a mini-zoo and a rehabilitation centre, as well as a foster care centre for confiscated carnivorous birds. The old Russian tradition of falconry is gradually being revived. A national falconers' convention is held annually at the site.



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