

Construction of Unique Buildings and Structures



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Master's degree in Construction area according to results of Admission Company in Peter the Great Saint-Petersburg Polytechnic University in 2016

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ABSTRACT

The article presents data on admission in Institute of Civil Engineering in 2016, we define the popular master's degree programs. Furthermore, we show the ratio of plan of the admission and quantity of submitted applications. In addition, the task was to explore the contingent of enrollees. The results of the comparison of Institute of Civil Engineering with other universities in the Northwestern Federal District show that Peter the Great Saint-Petersburg Polytechnic University became the leader in admission to training master degrees in Construction area.

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1. Introduction

Peter the Great Saint-Petersburg Polytechnic University (SPbPU) is a multifunctional and multi-state higher education institution. Basic training of practice-oriented engineers and high level of requirements to students and professors of SPbPU allow university to occupy the leading position among technical universities of Russia [7,8]. It received the status of national research university in 2010. SPbPU entered the top-15 Russian universities in 2013. SPbPU should be in the TOP-100 of the QS World University Rankings in 2020 due to the activities of the Program "5-100-2020" [1].

Institute of Civil Engineering (ICE) is one of the most dynamically developing institutions of SPbPU [9-12]. That is why the university is one of the leading construction institutions of Russia. ICE prepares managers and leading specialists of building and design organizations, heads of departments, chief engineers of the project and leading designers [2].

The aim of the study is an analysis of admission to the master's degree programs in the field of Construction Engineering in ICE (SPbPU) in 2016. To achieve this goal it is necessary to solve the following tasks:

1. To compare the plans of admission to magistracy in the field of Construction Engineering in the universities in the Northwestern Federal District.
2. To determine the ratio of plan of the admission and quantity of submitted applications.
3. To explore the contingent of entrants.
4. To define the percentage ratio of entrants with the diplomas with honors depends on their previous place of study.
5. To show the percentage ratio of students who directly attributed the original of the diploma to the admission office of the ICE.

The average score of Unified State Examination (USE) estimates the effectiveness of admission to baccalaureate (specialty) in universities [13-16]. SPbPU took the first place in Russia in the average score (80.7) of enlisted students in the field of Construction Engineering with an enrolment more than 20 people [3]. The following Russian universities also entered the top-5:

- Saint-Petersburg State University of architecture and civil engineering (75.7);
- Ufa State Petroleum Technological University (74.8);
- South Ural State University (73.9);
- Kazan State University of architecture and engineering (72.6).

In this article we take into account the results of the admission only to master's degree programs, not to the baccalaureate or specialty [17]. It should be noted that we cannot evaluate the efficiency of admission on the budgetary basis by the average score of the exams [18-20]. Assessment of the respectability of the University in this case is indirect.

2. Master's degree programs of Institute of Civil Engineering

The number of state-funded places in the magistracy is increasing every year in the university [21]. Today SPbPU (in particular, the ICE) takes the first place in Russia in the number of accepted students in the field of Construction Engineering. ICE carries out intake of students as to the places financed from the Federal budget as to places with tuition paid on a contractual basis [22].

ICE holds admission to the master's degree programs in two fields of study such as «Construction Engineering» and «Environmental and Water Use». Today the ICE offers 10 master's degree programs in the field of Construction Engineering and one in the field of Environmental and Water Use (table 1).

Table 1. Master's degree programs of the ICE [2].

Program name	Program profile
08.04.01 Construction Engineering	Organization and management of construction and investment projects
	Computer-aided design of buildings and structures
	Engineering systems of buildings and structures
	Civil Engineering (master's degree program in English)
	Energy Efficient and Sustainable Buildings (master's degree program in English)
	Innovative methods of design and construction of hydraulic structures
	Urban Construction and Economy
	Environmental engineering protection in construction
	Survey and technical audit of buildings and structures
	Technology of calculation, design and construction of industrial and civil buildings and structures with the use of modern software
20.04.02 Environmental and Water Use	Landscape arrangement of the territory

Student can focus on industry-specific issues, for instance, on examination in more details the areas which are necessary for future professional activities, particularly in the field of innovation. All students have the opportunity to receive additional scholarship allowances for becoming successful in different types of activities (educational, research, public, cultural, creative and sporting) [23-27]. The ICE maintains contacts with a wide range of organizations, which actively participate in the process of training graduate students by employment in a prestigious construction company in the country.

3. The results of admission to master's degree programs of Institute of Civil Engineering

Not every bachelor can become the master [28,29]. Each student should pass Multiple Choice Test in a relevant field of studies to enter the university [30].

The ICE took first place in admission to baccalaureate, magistracy, specialty in the field of Construction Engineering on budgetary basis in the Northwestern Federal District in 2016 (table 2).

Table 2. Plan of the admission to magistracy in the field of Construction Engineering in the universities in the Northwestern Federal District (2016).

	The ICE (SPbPU)	Saint-Petersburg State University of architecture and civil engineering [4]	The National Mineral Resources University [5]	St. Petersburg State University of Communication [6]
Magistracy «Construction Engineering»	240	171	-	12

In table 3 there are results of the admission to master's degree programs in full-time or correspondence form of education in 2016.

Table 3. Results of the admission to master's degree programs of the ICE in 2016.

	Construction Engineering		Environmental and Water Use	
	Full-time form	Correspondence form	Full-time form	Correspondence form
Plan of the admission	240	75	23	-
Quantity of submitted applications	367	26	41	-

Graduates of Russian and foreign universities submitted applications (fig.1). Nevertheless, the main part of entrants completed the bachelor degree at SPbPU and Saint-Petersburg State University of architecture and civil engineering (fig.2).

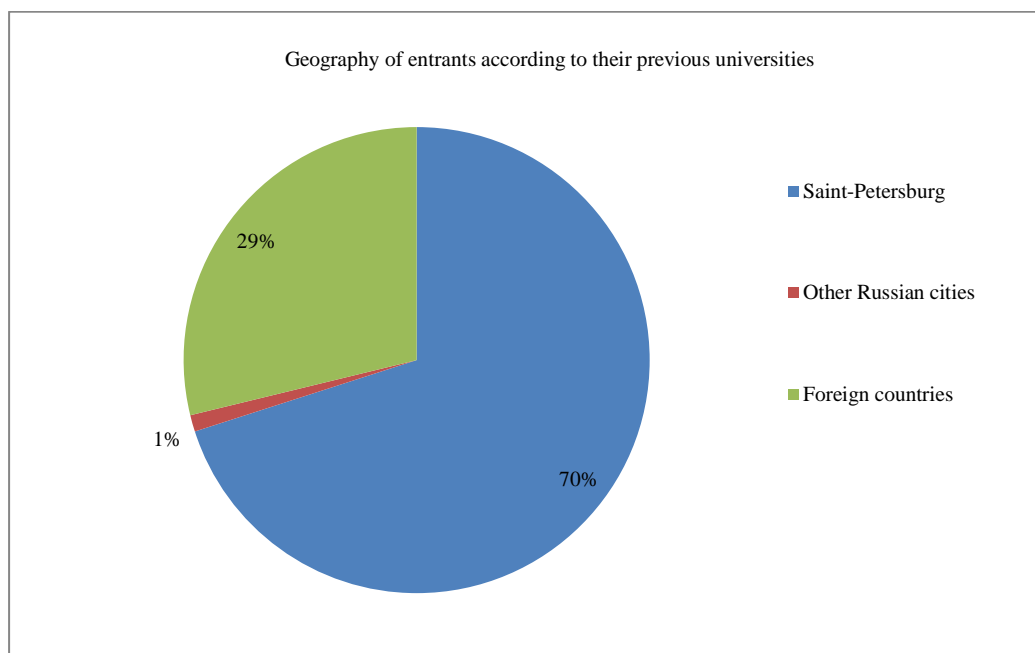


Figure 1. Geography of entrants according to their previous universities

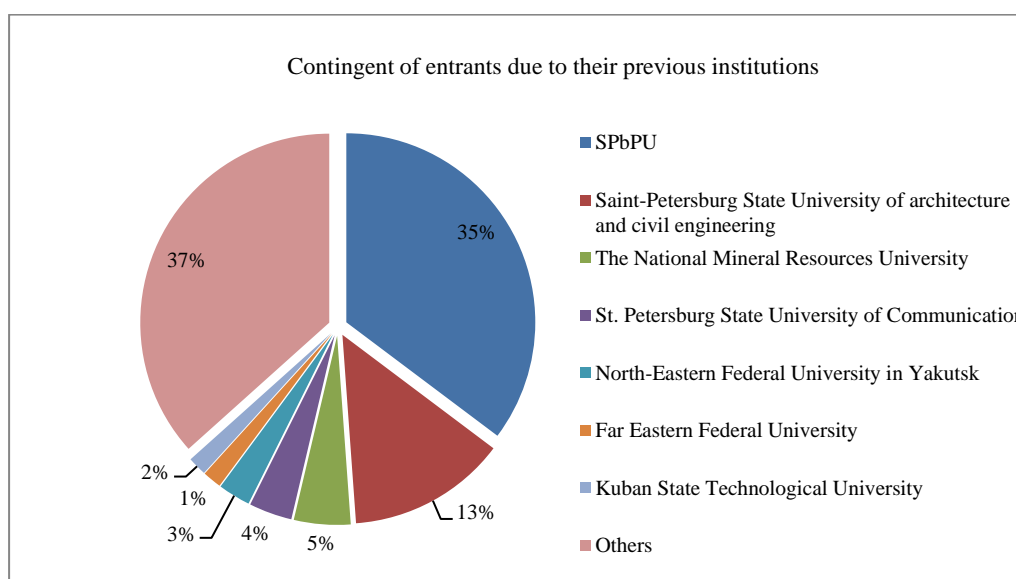


Figure 2. Contingent of entrants due to their previous institutions

Information about the master's profile program and the plan of admission is on the figure 3. There are the most preferable profile programs by entrants:

- 08.04.01.06 «Organization and management of construction and investment» (competition – 2.3),
- 08.04.01.10 «Computer-aided design of buildings and structures» (competition – 2.1),
- 08.04.01.11 «Engineering systems of buildings and structures» (competition – 1.5),
- 08.04.01.15 «Innovative methods of design and construction of hydraulic structures» (competition – 1.5),
- 08.04.01.17 «Urban Construction and Economy» (competition – 2),
- 08.04.01.19 «Survey and technical audit of buildings and structures» (competition – 1.78).

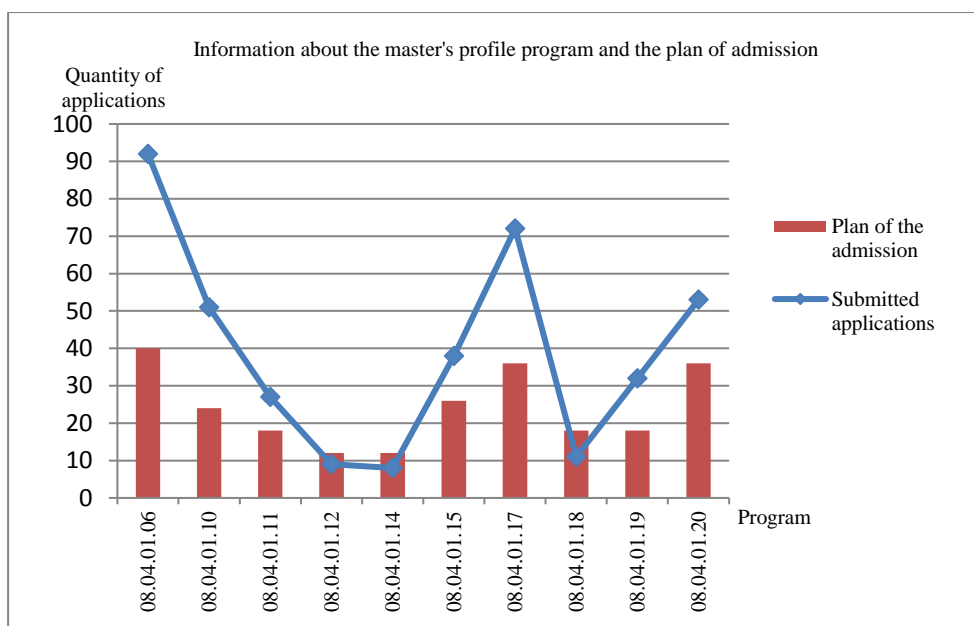


Figure 3. Information about the master's profile program and the plan of admission

The percentage ratio of entrants with the diplomas with honors depends on their previous place of study [34-36]. Mostly, there are graduates from SPbPU (35%) and Saint-Petersburg State University of architecture and civil engineering (16%). (Fig.4)

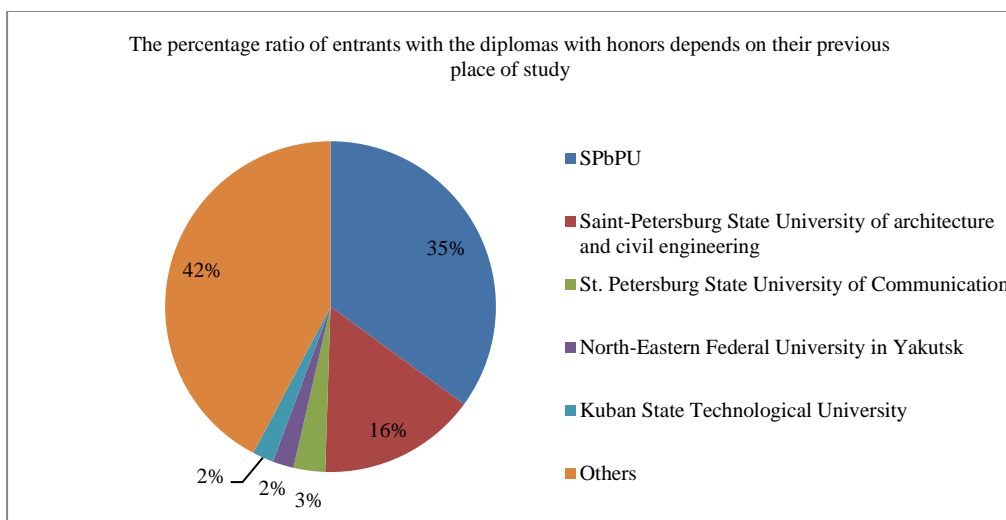


Figure 4. The percentage ratio of entrants with the diplomas with honors depends on their previous place of study

The Institute has the international accreditation of educational programs [37-39]. Some of teachers of ICE are active managers and employees of the leading construction companies of the city. Cooperation with construction companies is one of the foreground directions of the activities in the Institute. This allows to financially support the students during their studying by assigning scholarships, special grants and helping with the rapid employment [31-33]. That is why more than half of students (53%) directly attributed the original of the diploma to the admission office of the ICE (fig.5), which proves that SPbPU is at forefront for entrance.

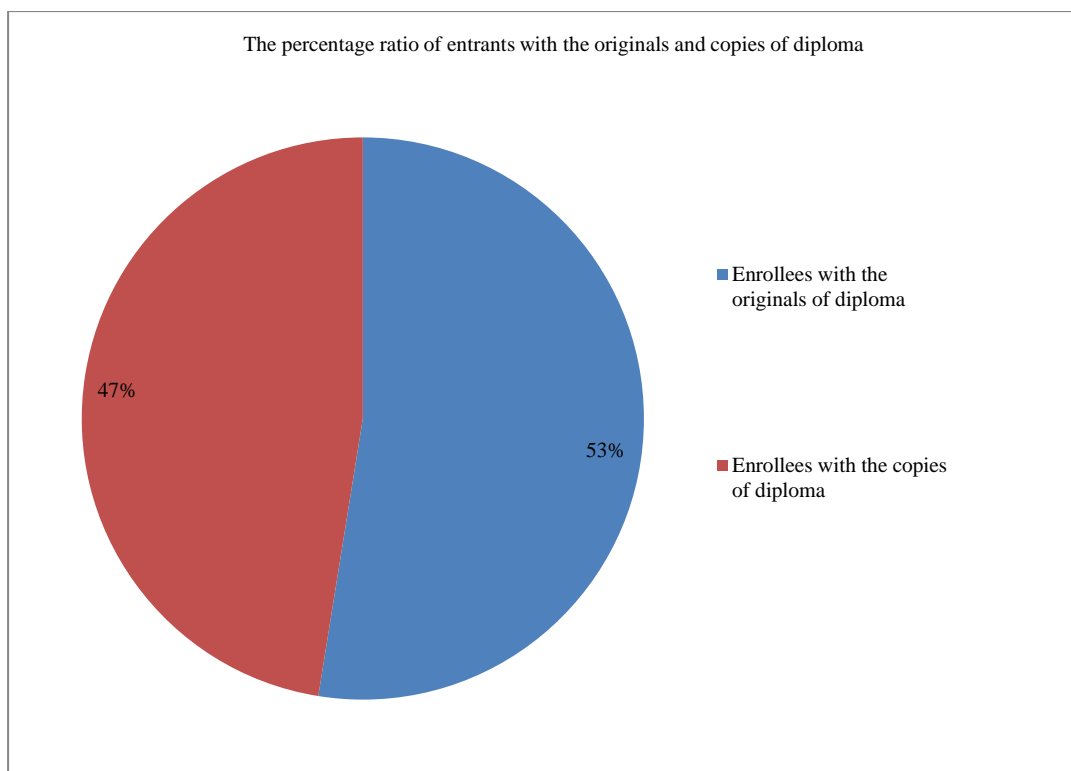


Figure 5. The percentage ratio of entrants with the originals and copies of diploma

4. Conclusions

The magistracy provides preparation of scientific and pedagogical staff, helps to identify the ability of students to the research work and thus, to determine the future direction of its activities. A master's degree gives the opportunity to feel confident in life and to find a high-paying job.

The Institute of Civil Engineering is the leader in the admission to the master's degree programs in the field of Construction Engineering among universities in the Northwestern Federal District of Russia. The vast majority of enlisted students got the bachelor's degree at SPbPU and Saint-Petersburg State University of architecture and civil engineering. A variety of master's programs allows involving the applicants with a high level of knowledge, which in turn helps the University to improve its position in the world rankings of universities.

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Прием в магистратуру по направлению «Строительство» в Санкт-Петербургском политехническом университете Петра Великого в 2016 году

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АННОТАЦИЯ

В статье приведены данные по приему в магистратуру Инженерно-строительного института СПбПУ в 2016 году, определены популярные программы подготовки магистров. Представлена информация о выборе абитуриентов магистерской программы (направление «Строительство») и его соотношении с планом приема по этим программам. Изучен контингент поступающих (в зависимости от вуза, где было получено предыдущее образование). Проведено сравнение результатов приема в магистратуру по направлению «Строительство» в вузы Северо-Западного региона Российской Федерации в 2016 году, на основании которого сделан вывод о лидерстве Инженерно-строительного института Санкт-Петербургского политехнического университета Петра Великого по приему в магистратуру по направлению «Строительство» в 2016 году.

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