



## MASTER OF SCIENCE IN CIVIL ENGINEERING

### CIVIL ENGINEERING

#### International Master's Degree Program in English

Key information about the study program in Saint-Petersburg, Russia



[www.eng.spbstu.ru](http://www.eng.spbstu.ru)  
[www.cef.spbstu.ru](http://www.cef.spbstu.ru)

### Why Master's Degree Program in Civil Engineering at Peter the Great St. Petersburg Polytechnic University?

- Master's Degree program "Civil Engineering" is fully in English.
- World-class professors from SPbPU and leading European universities.
- Unique opportunities for international mobility. Taking semester abroad at academic partners of SPbPU.
- Selection of elective courses for building individual track based on personal interests.



#### Peter the Great St. Petersburg Polytechnic University

In 2010 SPbPU became a "National Research University", also known as Polytech — a recognized Russian leader in the field of higher engineering and economic education. Nobel Prize winners P. L. Kapitsa, N.N. Semenov, Zh. I. Alferov — are just a few names among hundreds of talented scientists whose activities are connected with Polytech.

The Institute of Civil Engineering has been operating since 1907 (former name of Civil Engineering Department). Since that time it aims to prepare specialists in sphere of civil engineering, hydraulic engineering construction and engineering protection of environment. The Institute established partnerships with a number of universities in Europe, Asia and America that provide its students with the opportunity to participate in training programs abroad. Now it is a well known leader of technical education in Russia.



## KEY FACTS

► Admission requirements	Candidates are required to hold a Bachelor's, Specialist's or Master's Degree in related subject area, all applicants must demonstrate English language proficiency at B+ level.
► Admission tests	Examination in the field of civil engineering and interview in English language with program coordinator (option — via Skype).
► Admission procedure	Written online application. Application deadline — June, 30. International applicants may find additional information concerning admission at the official website of SPbPU <a href="http://www.eng.spbstu.ru">www.eng.spbstu.ru</a> .
► Program starts	Autumn semester — September, 1.
► Duration of program	2 years
► Degrees awarded	Master of science (MSc)
► Tuition fee	for Russian students — 150 000 RUB / year for foreign students — 210 000 RUB / year



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## Curriculum

### 1st SEMESTER (30 ECTS)

- Building Information Modeling (BIM)
- Structural Mechanics
- Fluid Mechanics for Engineering
- Business Planning in Construction
- International Communication in Construction Business
- Scientific and Research Work
- Building Materials / In-Service Strength and Reliability of Structures (**elective course**)
- Information Technologies for Civil Engineering / GIS-Technologies for Civil Engineering (**elective course**)

### 2nd SEMESTER (30 ECTS)

- Construction Technologies
- Building Structures
- Real Estate Economics
- Mathematical Modeling
- Teamwork and self-management
- Scientific and Research Work

### 3rd and 4th SEMESTERS (60 ECTS)

- Inspection of Buildings and Construction
- Project Management in Construction
- Energy Efficient Buildings and Structures
- Construction Ecology / Water Facilities (**elective course**)
- Modes of Renewable Energy Using/Modes of Renewable Energy Using (**elective course**)
- Research Methodology
- Scientific and Research Work
- Master's Thesis Completion

Master thesis has to be defended in front of committee consisting of professors and corporate representatives.

## MSc in Civil Engineering

The program is realized by key professors of SPbPU's Institute of Civil Engineering and lecturers of leading European Institutes. The program participants are required to have a Bachelor's Degree in Civil Engineering or an equivalent degree according to the educational system of the country they represent. They should possess fluent command of English as a foreign language. The language of all lectures and examinations is English.

### Objective of the program

The aim of the program is preparing Masters of Science in Civil Engineering with high-level knowledge in the field of management and organization construction projects, design of buildings and structures. Upon graduation participants will have acquired the knowledge and skills needed for a future successful career in construction.

### KEY ADVANTAGES

1. The program provides our students:
  - individual work with each student, includes active scientific research and experience of teaching activities;
  - regular participation at seminars, conferences, scientific forums;
  - active engagement of teachers and students during a joint project and research activities;
  - using modern computer technology in construction;
  - communication with representatives of the leading construction and engineering companies;
  - online learning on basis remote system Moodle ([www.dl.spbstu.ru](http://www.dl.spbstu.ru)).

2. The program offers a unique opportunity to undertake an internship in European partner universities.

3. We offer each student of the program "Civil Engineering" to take a semester abroad in English language in one of the European partner universities.

### Duration and format

2 years, 3 times a week classes

### Total workload

120 ECTS

### TEACHING METHODS

The main consideration of the program is developing practical skills of:

- design and analysis of building structures and building services and facilities;
- 3D-modeling of buildings and structures (BIM skills);
- development of energy efficient technologies and solutions in the construction;
- organization, planning and management of investment and construction projects;
- publishing and scientific research work.

### PARTNERS

Every student may take one semester abroad in one of the European partner universities.



1. Helsinki Metropolia University of Applied Sciences (Finland) — Finland's largest university of applied sciences, educates the professionals of tomorrow in the fields of culture, business, health care and social services, and technology.

Master's degree program "Construction and Real Estate Management", "Civil Engineering: Sustainable Building Engineering".



2. Leibniz Universität Hannover (Germany) — today there are around 22,000 students in the natural sciences and engineering, the humanities and social sciences as well in law and economics.

Master's degree program (Faculty of Civil Engineering and Geodetic Science).



3. Graz University of Technology (Austria) — pursues top teaching and research in the fields of the engineering sciences and the technical-natural sciences. Ultimately, the quality of the education and training at Graz University of Technology is carried by the strength of its knowledge-oriented and applied research.

Master's degree program "Civil Engineering and Structural Engineering", "Construction Management and Civil Engineering", "Civil Engineering, Geotechnics and Hydraulics", "Civil Engineering, Environment and Transportation".