

# International Polytechnic Summer School "Civil Engineering"

Peter the Great St. Petersburg Polytechnic University

Degree or qualification is awarded:

**Internationally Recognized SPbPU Certificate** with list of completed courses, grades and ECTS

Language of study: **English**

Mode of study: **full-time, distance learning**

Duration: **2 weeks**

Availability of free education: **no**

Price: **270-510 euro**

Programme webpage at the university website: [https://summerschool.spbstu.ru/programs/civil\\_engineering/](https://summerschool.spbstu.ru/programs/civil_engineering/)

Programme curator: **Department of International Educational Programs**

Tel.: **+7 (812) 534-25-31**

E-mail: [summerschool@spbstu.ru](mailto:summerschool@spbstu.ru)

July 19 - July 30, 2021

## Building information modeling

The course introduces the basics of the BIM (Building Information Modeling), its conception, available software and ways to use this technology in real work process.

This course discusses how BIM provides contractors with the benefit of improved visualization of a construction project through the use of a 3D virtual model, establish a base of knowledge of BIM terminology and look at the benefits of BIM and case studies showing implementation before encouraging participants to study how they could implement BIM. Students do not only acquire a profound professional and methodical education but also the communication skills and cross-cultural experience necessary for future international management posts. The BIM program contains not only general BIM conception, but also its problems, solutions, ways to use and comparison of main software available today, and real experience of using Autodesk Revit – world-leading BIM platform, allowing create and manage projects faster and more economically.

The course is based on a real experience of BIM implementation in leading Russian's project and construction companies, BIM software teaching.

The lectures cover the essential features BIM modeling and leading software.

## Energy efficiency of the buildings

The course introduces the concept of energy saving in the world, formation the energy efficiency in Russia and examples of its application in civil engineering. At the beginning students are given brief introduction to the Energy consumption in the residential sector, thermal loss of buildings, the concept of heat and moisture transfer in enclosing structures, types and classification of environmentally friendly building materials.

Students will know how to determine the energy efficiency classes of buildings, basic indicators of energy consumption, they will consider economical and environmental aspects in the field of energy saving, the major green building rating systems LEED and BREAM.

The course is held in the form of workshop, where students will consider real projects of new and existing buildings, different ways of improving the energy efficiency of the building, using practical calculations and BIM (Building Information Modeling) technology.

Duration: 2 weeks

ECTS credits: 4.0

Participation fee:

Online format: 270 eur

On-site format: 510 eur

Participation fee includes tuition fee, study materials, field trips (for on-site format) and cultural program.

Cultural program

Socio-cultural program of extracurricular activities and networking events are included\*:

Online format:

- - Online Pub Quiz;
- - Online Interactive Tour to SPbPU Museum;
- - Online broadcasting of excursion to the Hermitage museum;

On-site format:

- - Boat city tour for students to get acquainted with the beauty of the city;
- - Excursion to the Hermitage, one of the world's largest and oldest museums of fine art;
- - Pub Quiz in the city center of St. Petersburg;
- - Excursion to Pushkin, former czar summer residence famous for its palace and park ensemble. Students will visit the outstanding Catherine Palace with glorious Amber room (optional, for extra price);
- - Excursion to Peterhof palace-ensemble with picturesque gardens, a countless number of fountains and giant golden statues (optional, for extra price)

\*All of the listed above activities are planned to take place but in case any of those will have to be cancelled, an alternative event will be offered to participants.

Deadline for registration

Online format: July 05, 2021

On-site format:

- for EU- or visa-free countries nationals: June 21, 2021

- for non-EU nationals: May 11, 2021

## **Specializations within this programme**