



POLYTECH

Peter the Great
St. Petersburg Polytechnic
University

ENGINEERING

**ENERGY EFFICIENT
AND SUSTAINABLE BUILDING**

PROGRAM NAME: Energy Efficient and Sustainable Building

AWARD: Master of Science in Engineering

MODE OF STUDY: Full-time (state-funded + contract)

COURSE DURATION: 2 years: 3 semesters at SPbPU + 1 semester at a partner university (optional)

PROGRAM OUTLINE: The program is developed for those who are concerned with renewable energy, energy efficiency and sustainability in civil construction with the focus on developing one's expertise in building engineering, building design, project management, and design of renewable energy facilities. The program is designed to combine theoretical knowledge and practical skills to challenge emerging industry issues under economic and sustainability policy of a local area.

CURRICULUM (GENERAL MODULES):

MODULES	ECTS
History and Methodology of Science	3
Scientific Discourse	3
Foreign Language in Professional Activities	4
Digital Modeling of Buildings and Structures BIM	2
Mathematical Modeling	3
Special Units of the Dissertation Research	4
Project Management in Industry	4
Renewable Energy Sources	2
Energy Efficient Building Materials	2
Water Supply and Water Treatment	2
Design of Energy Efficient Buildings	4
Special Course on Building Materials	2
Reliability of Building Structures	3
Economy of Real Estate	2
Project Management in Construction	2
International Communications in the Construction Business	2
Business Planning in Construction	2
Information Technologies for Territory Development	2
GIS Technology in Construction	2
Elective Disciplines	10
Scientific and Research Work of Master	21
Study Practice	6
Technological Practice	6
Pre-Diploma Practice	9
Scientific and Research Practice	12
Preparation and Defense of Master Thesis	6

ENTRY REQUIREMENTS: Bachelor's, Specialist's or Master's degree in a relevant area is required / English language proficiency - B+ (CEFR B2) / Exam Test in a relevant field of studies / Interview in English with a program coordinator (Skype option is available)

PARTNERS:

- Italy – Politecnico di Milano
- Austria – Graz University of Technology

CAREER OPPORTUNITIES: With the knowledge and practical skills acquired by completion of this course, many graduates may continue to study for a PhD, become research assistants or work for international companies or set up their own business

