

# Building Constructions and Structures

Far Eastern Federal University

Degree or qualification is awarded: **Candidate of Sciences**

Language of study: **Russian**

Mode of study: **full-time, part-time**

Duration: **4 years**

Availability of free education: **yes**

Price: **320 000 rub per year (full-time) / 160 000 rub per year (part-time)**

Programme webpage at the university website:

<https://www.dvfu.ru/upload/medialibrary/a06/%D0%9F%D0%B5%D1%80%D0%B5%D1%87%D0%B5%D0%BD%D1%8C%D0%BF%D1%80%D0%BE%D0%B3%D1%80%D0%B0%D0%BC%D0%BC%20%D0%B0%D1%81%D0%BF%D0%B8%D1%80%D0%B0%D0%BD%D1%82%D1%83%D1%80%D1%8B,%20%D0%BE%D0%B1%D1%8A%D1%8F%D0%B2%D0%BB%D0%B5%D0%BD%D0%BD%D1%8B%D1%85%20%D0%B2%20%D0%BD%D0%B0%D0%B1%D0%BE%D1%80%202020%20%D0%B3%D0%BE%D0%B4%D0%B0.pdf>

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Successful training gives the graduate the following opportunities:

- formation of a new scientific topics;
- organization of the own research work;
- innovative activity in a chosen area;
- application and improvement of modern information technologies;
- teaching in the field of higher education;
- practical activity in the area of formation and analysis of complex building systems.

Building constructions and structures – field of science and technology, engaged in the creation and improvement of rational types of structures, methods of their calculation, volume-planning solutions of industrial, civil and agricultural buildings, as well as their complexes. This specialty includes scientific and technical research and development in the field of volume-planning solutions of buildings and structures, their technical operation and structural safety, based on the use of technical, economic, mathematical and other modern scientific methods. The importance of scientific and technical problems that solves specialty 05.23.01 for the national economy includes design of the most perfect and reliable structures, rational and comfortable volume-planning solutions of buildings and structures.

Research area:

1. Justification, research and development of new types of bearing, self-bearing and covering structures of buildings.
2. Volume-planning and design solutions justification, development and optimization for buildings and structures, considering their inner processes, natural and climatic environment, economic and structural safety, based on mathematical modeling, using automated tools of research and design.
3. Creating and developing effective methods of calculation and experimental research of newly constructed, restored and reinforced construction structures that are fully represent the specifics of the impacts on them, the properties of

materials, the specifics of design decisions and other features.

4. Development of reliability assessing methods for construction structures, buildings and structures, forecasting their lifespan, safety in emergency situations and extreme impacts.
5. Development and improvement of methods and systems of quality for construction structures, buildings and structures during their construction, operation, reinforcement and restoration phase.
6. The search for rational forms, size of buildings, premises and their covering structures based on the conditions of their placement on the construction site, the activities of people and the movement of human flows, technological processes inside the building, sanitary conditions and environmental safety.
7. Theoretical foundations development for construction and acoustic methods and means, searching of rational solutions of lighting buildings and individual premises, rational volume-planning and design solutions of buildings and structures aimed to increase the efficiency of investment, energy and resource conservation, creating comfortable conditions for people and optimal conditions for technological processes.
8. Methods and techniques of assessing and diagnosing of technical condition, strengthening and restoring structures and elements of buildings and structures, modern forms of maintenance of buildings, structures and their life support systems.

Partners of the program are public associations (self-regulatory organizations) of designers and builders of Primorye region.

Period of study: full time – 4 years, part-time – 5 years

### **Specializations within this programme**