Internships

Higher Engineering School (studying area: Construction in a cold climate)
1. Process management of construction composite quality formation given the state of the dispersive materials’ surface

Master’s Degree
08.04.01 Construction Industrial and Civil Engineering in cold climate (special course «Building materials»)

**Duration:** 1 semester (min 1 month)

**Languages:** Russian / English

**Scientific Coordinator:** A.M. Aizenshtadt, Doctor of Sciences in Chemistry, Professor, Head of dept. Composite materials and Environmental Engineering

E-mail: a.isenshtadt@narfu.ru

Phone: +7(8182) 41 28 34 / +7(8182) 41 28 33

**Students are required to have basic knowledge of:**

- Materials Science;
- Chemistry;
- Physics;
- Physical-mechanical and colloid-chemical properties of building materials’ components;
- Methods and technologies of construction composites production.
Main topics:

- Methods of producing nano-sized materials;
- Principal properties of nanostructures;
- Methods of studying basic nanomaterial properties;
- Formation and production principles of nanocomposites for constructional purposes;
- Particularity of nanotechnology in production of building materials;
- Evaluation methods of fire-technical properties of building material and nanocomposites.

Department of Composite Materials and Environmental Engineering has 6 unique Laboratories:

- Lab of research and analysis on composite building materials
- Laboratory of assessment and quality control of building materials
- Laboratory of environmental assessment of building materials
- Remote experimental laboratory
- Laboratory of fire and technical expertise of building and finishing materials
- Laboratory of mechanical activation of raw materials
Main Equipment

Delsa Nano Series Zeta Potential and Submicron Particle Size Analyzers

Real-Time Particle Size Analysis At Full Process Concentration

Contact Angle Measuring Instrument EasyDrop

Specific surface area and pore size automatic analyzer - Autosorb-iQ-MP

Planetary Ball Mill PM 100

Laboratory Modular Dispersing System

Vibrating Ball MB-20
2. Determination of the soil properties and numerical simulation in geotechnics

Master’s Degree
08.04.01 Construction Industrial and Civil Engineering in Cold Climate
(special course «Geotechnics»)
**Duration:** 1 semester (min 1 month)
**Languages:** Russian / English
**Scientific Coordinator:** A.L. Nevzorov, Doctor of Sciences in Geotechnics, Professor, Head of dept.
E-mail: a.l.nevzorov@yandex.ru
Phone: +7(8182) 41 28 99 / +7 911 554 68 28
Students are required to have basic knowledge of:

- Geology;
- Soil Mechanics;
- Physics;
- IT

Main topics:

- Methods of studying basic soil properties;
- Field investigation of building foundations;
- Frost heave of soils;
- Numerical simulation in geotechnics (PLAXIS, ANSYS, GeoStudio)