



VILNIUS COLLEGE OF TECHNOLOGIES AND DESIGN

Engineering Systems of Buildings

Faculty: Civil Engineering Faculty

State Code: 6531EX019

The Scope of the Study Programme: 180 credits

Duration of Studies: 3 years

General Description:

Objective(s) of a study programme:

To prepare competitive, well-qualified construction engineering specialists having knowledge, abilities and skills to work in the Civil engineering field, being able to operate in competitive working conditions and solve professional and society problems.

Learning outcomes:

Knowledge and its application:

Will know general regularities and laws of natural sciences and mathematics in order to understand the fundamental basics of civil engineering study field. Will know the most important concepts of civil engineering study field, will be able to understand their content and will be able to solve them creatively, applying suitable methods. Will have the main knowledge in civil engineering that are important while working practically.

Competences to carry out research:

Will be able to find proper professional information using data bases and other scientific and engineering information resources. Will be able to carry out proper applied research for solving engineering tasks, process their results and present practical conclusions of these results. Will have skills to operate the equipment used in the field of Civil Engineering.

Special skills:

Will be able to apply knowledge while analysing and solving engineering tasks, will select appropriate methods, experimental and production equipment. Will be able to apply engineering knowledge in the field of energy engineering when formulating and carrying out the design tasks in accordance with the design methodology and the laid down requirements. Will have practical knowledge and skills required to select engineering solutions, as well as means and equipment needed to implement them. Will understand operational principles of engineering activity, will know the main requirements for human safety and fire safety. Will understand ethical, environmental and commercial considerations of engineering activity.

Social skills:

Will be able to understand the impact of engineering solutions on society and environment, comply with professional ethics and standards of engineering. Will be able to solve engineering challenges in a team, communicate with colleagues and experts in related fields, the general public; be a leader; defend their position argumentatively.

Personal skills:

Will be able to deal with engineering tasks individually and will understand their impact on society and environment, will be able to plan their work and time, will obey the norms of professional ethics. Will be aware of the main aspects for project implementation and management on the level of engineering activities. Will comprehend the importance of individual lifelong learning and will prepare for it.

Activities of teaching and learning:

Lectures, consultations, practical tasks and course papers, individual work, practices of professional activities. Students accomplish practical tasks individually or in groups.

Methods of assessment of learning achievements:

The student's knowledge, skills and abilities acquired while studying subjects of a study programme are assessed after completing of individual assignments performed during the semester and exam session. The achieved learning outcomes after completion of subject/module studies are assessed attributing them to the levels of achievement: excellent, typical and threshold.

Framework:

Study subjects (modules), practical training:

General College Study Subjects:

Foreign Language, Contemporary Lithuanian, Environmental and Human Safety and alternatively optional subjects (Sociology, Psychology, Philosophy – selected one of them).

Subjects of the Study Field:

Mathematics, Applied Physics, Chemistry, Information Technologies, Engineering Graphics, Applied Mechanics, Structures and Materials, Thermodynamics, Hydraulics and Aerodynamics, Geodesy, Theory of Economics, Economics of Enterprises, Design Management, Applied Research, Heating of Buildings, Gas Supply, Water Management of Buildings, Ventilation of Buildings, Mounting of Engineering Systems, Renewable Energy Sources, Electricity Supply and Engineering Systems Management, Supervision of Engineering Systems.

Special Study Subjects:

Law, optional subjects by choice of students (History of Architecture, Personnel Management, Social Project, Professional Ethics, Efficiency of Energy Consuming, Architecture of Engineering Structures, Document Management, BIM, Business English – selected three of them).

Practices:

Installation Practice, Industrial Practice, Final Practice.

Completion of Studies:

Studies are completed by defending the Final work individually prepared by a student.

Distinctive features of a study programme:

The programme focuses on application of technological processes for maintenance of engineering systems of buildings (heating, water management, ventilation). Student has knowledge, necessary for preparation of engineering systems design, management of technological processes also for organization and implementation of engineering systems maintenance.

Access to professional activity or further study:

Graduate can work in state and private construction enterprises operating in construction sector as heads of manufacturing divisions, engineers, designers, managers, create his/her own business.

Graduate can continue his/her studies having chosen university study programmes in the field of Civil Engineering.