VILNIUS COLLEGE OF TECHNOLOGIES AND DESIGN

Geodesy and Cadastre

Faculty: Civil Engineering Faculty

State Code: 6531EX017

The Scope of the Study Programme: 180 credits

Duration of Studies: 3 years

General Description:

Objective(s) of a study programme:

To prepare measurement engineering specialist having professional knowledge about measurements on the earth surface and being able to apply the knowledge preparing various plans, labelling construction projects, applying geodetic measurements in checking the construction process using the advanced geodetic measurements and measurements results processing technologies.

Learning outcomes:

Knowledge and its application:

Will know general regularities and laws of natural sciences and mathemathics in order to understand the fundamental basics of measurement engineering study field.

Will know the most important concepts of measurement engineering and adjacent study fields, will be able to understand their content and problems and will be able to solve them creatively, applying suitable methods.

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 collect, systemize and analyse data, to process them and apply for the mastering new technologies of measurement engineering, for solving tasks of measurement engineering and present practical conclusions of these results.

Special skills:

Will be knowable of methods of remote surveying and measurement, will have skills of working with the newest measuring and data processing equipment. Will be able to choose the appropriate equipment and methods for data selection and processing, to prepare topographical plans and maps, required for planning work. Will be able to prepare geodesy plans for engineering network and will understand their importance. Will be able to use geodetic measurements when checking geometry of structures and when solving various engineering problems. Will be able to apply the acquired knowledge while preparing landplaning documents, projects and real estate cadastral data. Will

understand operational principles of measurement engineering activity, will know the main requirements for human safety and fire safety.

Social skills:
Will be able to work in a team, communicate with colleagues and experts in related fields, the general public; be a leader; defend their position argumentatively.
Will be able to solve engineering challenges individually, plan their work and time, comply with professional ethics and standards of engineering.
Will be able to maintain professional competence through lifelong learning and apply study skills for development of a versatile personality.

Personal skills:
Will be able to think critically, evaluate and present the results of work, using correct written and oral official language and in at least one foreign language for various audiences.
Will understand the impact of engineering decisions for society and environment, comprehend responsibility for the results of theirs activities.
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, Professional Lithuanian, Environmental and Human Safety and alternatively optional subjects (Sociology, Psychology, Philosophy – selected one of them).

Subjects of the Study Field:
Mathematics, Physics, Chemistry, Information Technologies, Geology, Theory of Economics, Economics of Enterprises, Design Management, Law, Engineering Graphics, Measurement Theory, Topography, Processing of Measurement Results, Geodetic Instruments, Photogrammetry, Higher Geodesy, Cartography, Realty Cadastre, Engineering Geodetic Explorations, Geographic Information Systems.

Special Study Subjects:
Applied Research, optional subjects by choice of students (Business English, Social Project, Personnel Management, Document Management, Landscape Architecture, Professional Ethics – selected three of them).

Practices:
Geodetic Measurements Practice, Digital Plans Drafting Practice, Digital Photogrammetry 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 study programme focuses on application of state-of-art technologies, special (AutoCad, GeoMap, ArcGIS) software application in measurement engineering also on practical tasks and problem solving, based on achievements of science. The students are provided with the opportunity to study, to have professional internships in other European countries according international exchange programmes.

Access to professional activity or further study:
After completion of studies, graduates will be able to work in various geodetic, cartographic, cadastral, designing, construction enterprises, land use planning services, also to create his/her own business.
Graduate can continue his/her studies having chosen university study programmes in the field of Measurement Engineering.