Intensive Bachelor`s Courses

APPLICATION OF MODERN TECHNOLOGIES IN RECONSTRUCTION OF GEODETIC NETWORKS

December 02 – 06, 2019
Latvia University of Life Sciences and Technologies
Jelgava, Latvia
4 ECTS

- **Development of different geodetic systems in Baltic countries and Europe**
- **Assessment of national geodetic network reconstruction in Baltic countries**
- **Different methods of geodetic measurements and technologies on field**

Course description:
The course is addressed to students from geomatics, geodesy, land management, landscape architecture and planning, forestry, environmental science, geography.

The aim of the course is to bring together students from different specialties and discuss the understanding of geodetic network performance order and methodology. The best precision of observations, also trigonometric, GNSS and precise leveling use for result and precision of geospatial solution. ***Geodetic field works***; modelling of current 3D surface model and specification of the different geoid models.
One part of studies will consist of distance learning – students will be provided with literature and the newest scientific articles on certain topics. Results of the home tasks will be presented and discussed during the workshop. Students will have team work and tasks to accomplish comparison of different countries experience before they will be present at lectures. Meeting for one week will consist of team work, theoretical lessons, practical seminars, field trips and measurements. Practical seminars have a goal to finalize team work of different students groups, while theoretical lessons are intended to clarify all unclear issues related to different topics in particular Baltic country. A filed trip to Riga, State Land Service and Latvian Geospatial Information Agency will be a good opportunity for students to see how precise leveling is realized, how height system replacement impacts surveying and geodetic data. There will be realized field measurement by different methods of leveling and evaluation of the results obtained.

Scientific content:
Parameter analysis of height system replacement procedure. The modelling of "perfect" height system replacement procedure will be done as a final work for the student groups. SWOT (strengths, weaknesses, opportunities, and threats) analysis will be accomplished for each Baltic country for height system replacement.

Learning outcomes:
– specialized knowledge and critical awareness on government and private institutions making decisions in organization of basic network levelling measurements, use of different levelling methods based on precision and economic conditions, impact of height system replacement in Baltic countries overall;
– skills to accommodate obtained knowledge in order to analyze and understand basic criteria of different solutions of height system replacement procedure, apply SWOT analysis;
– competences without assistance to use obtained knowledge and skills in practical work for finding better and most efficient solutions.

Team: International team of teachers from 3 Baltic countries

Course leader: *Associate Professor, Dr.sc.ing. Armands Celms*, Faculty of Environment and Civil Engineering, Latvia University of Life Sciences and Technologies

Distance learning part: November 19 – 30, 2019
Meeting in person: December 02 – 06, 2019

Information for registration and scholarship: Consult your local BOVA or NOVA coordinator.
Use http://www.bova-university.org/

If you have any questions, please contact BOVA coordinator at LLU: ilona.pukjane@llu.lv

Don't miss registration deadline – November 15, 2019