Application of modern technologies in reconstruction of geodetic height system
(4.0 ECTS)
Course venue: Latvia University of Agriculture, Jelgava, Latvia
Distance learning part 07th December – 11th December, 2020
Meeting in person 14th – 18th December, 2020

Course programme
Contact lessons 40 h, int.al. lectures – 20 h, seminars and laboratory work – 20 h

Monday 14.12.2020

8.30 – 9.00	Welcome, introduction of participants		A. Celms;
9.00 – 10.30	Geospatial frame in economy of states	Economy of states and geolocation.	H. Jürgenson, D. Rekus A. Celms
10.30 – 10.45	Break		
10.45 – 12.15	Different types of geodetic technologies.	Challenges in the development of geodetic systems.	V. Puķīte H. Jürgenson G.Balevičius
12.15 – 13.15	Lunch		
13.15 – 14.45	Significance of Geodetic Systems	Significance of Geodetic Network in State development (Why we need geodetic reference systems. Examples and discussion).	G.Balevičius D. Rekus A.Celms
14.45 – 15.00	Break		
15.00 – 17.00	Development of State network system.	History of basic geodetic network development. (Development of horizontal and vertical geodetic network)	G.Balevičius D. Rekus A.Celms

Tuesday 15.12.2020

9.00 – 10.30	Principles of construction of integrated geodetic networks	Integration of Levelling, GNSS, Gravimetric and Magnetometric geodetic networks.	H. Jürgenson, D. Rekus, A. Ratkevičs
10.30 – 10.45	Coffee break		
10.45 – 12.15	Construction of integrated geodetic networks	Practise in groups. Planning and construction of integrated geodetic system.	N. Liba, G.Balevičius, A. Celms
12.15 – 13.15	Lunch		
13.15 – 14.45	Experience from Field measurements	Measurement`s options with different types of geodetic instruments.	N. Liba V. Puķīte H. Jürgenson G.Balevičius D. Rekus A.Celms
14.45 – 15.00	Break		
15.00 – 17.00	Field measurements		

Wednesday 16.12.2020

9.00 – 17.00	National Geodetic network`s in Baltic see region and Europa	National geodetic support system structure and functions	V. Puķīte A. Celms G.Balevičius D. Rekus
		Mean see level (Tide gauge station)	

Thursday 17.12.2020

9.00 – 10.30	Land surveying and its supervision	Correction of field measurements.	H. Jürgenson, D. Rekus, V. Puķīte
10.30 – 10.45	Break		
10.45 – 12.15	Calculation of geodetic data.	Calculation of geodetic data. Discussion.	N. Liba, G.Balevičius, A. Celms
12.15 – 13.15	Lunch		
13.15 – 14.45	Preparation of Field measurements	Measurements with different types of geodetic technologies.	N. Liba V. Puķīte H. Jürgenson G.Balevičius D. Rekus A.Celms
14.45 – 15.00	Break		
15.00 – 17.00	Field measurements in different places		

Friday 18.12.2020

9.00 – 10.30	Perspective model of national geodetic system in Baltic countries and context of Europe. Presentations prepared by students. Discussions	H. Jürgenson, D. Rekus, A.Celms
10.30 – 10.45	Break	
10.45 – 12.15	Perspective model of national Geospatial system in Baltic countries and context of Europe. Discussions	G.Balevičius D. Rekus A.Celms
12.15 – 13.15	Lunch	
13.15 – 14.00	Summary of the topics covered during the course	A. Celms N.Liba, G.Balevičius
14.00 – 15.00	Test. End of the course	A. Celms D. Rekus G. Balevičius

Teachers:
1. Course leader Armands Celms, Dr. sc.ing, professor, Latvia
2. Vivita Puķīte, Dr.Oec. Proffesor, Latvia
3. Natalja Liba, Doctor of techn.sc. (PhD), professor, Estonia
4. Harli Jürgenson, Doctor of techn.sc. (PhD), professor, Estonia
5. Giedrius Balevičius, MSc geodesy, Lecturer, Lithuania
6. Donatas Rekus, Doctor of technology science, Associate professor, Lithuania