

Study program: Geodesy			
The type and level of study: Basic academic studies			
Course title: GEODETIC NETWORKS			
Teacher: Delčev Siniša			
Status of the course: Mandatory			
ECTS: 5			
Conditional course: No			
The course aims The students mastering with the theory, principles and methods for development of geodetic reference network and the network of special purpose.			
Outcome of the course Students are trained to independently perform all the necessary calculations required to create a project of any kind of geodesic networks.			
The content the course <i>Theoretical classes:</i>			
1. week	The subject, objectives and tasks of the geodetic reference network. A brief historical development of geodetic reference networks.		
2. week	Reference systems and geodetic Datum, shortly. Horizontal Datum and positioning of the horizontal Datum.		
3. week	Principles of developing the geodetic reference network. Horizontal networks.		
4. week	Shape, testing of accuracy and reliability, analysis and detailed elaboration of the methods of measurement.		
5. week	Reduction parameters - accuracy and analysis of methods for their determination.		
6. week	Reduction parameters - accuracy and analysis of methods for their determination.		
7. week	Measurement and processing of measurement results, with accuracy estimation, in horizontal networks.		
8. week	I colloquium.		
9. week	Systems heights. Gravimetric networks.		
10. week	The vertical Datum and positioning of the vertical Datum. The height networks. Shape, testing of accuracy and reliability, analysis and detailed elaboration of the methods of measurement.		
11. week	Calculation of reduction parameters. The problem of reducing the measured acceleration of the earth's gravity. Measurement and analysis of the results of measurements in height networks.		
12. week	Trigonometric networks of lower orders and polygonal networks - basic principles of developing, processing and accuracy estimation.		
13. week	City geodetic networks - history and basic principles of developing and processing.		
14. week	Special purpose geodetic networks - basic principles of developing and processing.		
15. week	II colloquium.		
<i>Practical teaching: Exercises</i> He follows the course of theoretical classes.			
Literature			
1. Vaniček P., Krakivsky E., Geodesy: the concept, North-Holland Publishing company, Amsterdam - New York - Oxford, The Netherlands, 1980.			
2. S. Delčev: Zbirka rešenih zadataka iz geodetskih referentnih mreža, Građevinski fakultet Univerziteta u Beogradu, ISBN 978-86-7518-094-4, 2009.			
3. S. Ašanin, Inženjerska geodezija 1, Ageo d.o.o, Beograd, 2003.			
Number of active teaching classes			
Theoretical classes:	Practical teaching:	Other forms of teaching:	Study research work:
2	2	0	0
Other classes: 0			
Methods of teaching practice: lectures, exercises, colloquiums, consultations.			
Evaluation of knowledge (maximum point score: 100)			
Pre exam duties	points	Final exam	points
activity during the lectures	5	written exam	(40)
practical teaching	5	oral exam	50
colloquium-s	40	-	-