

Course title: Surveying techniques in geodesy

Course Basic Information			
Academic Unit:	Faculty of Civil Engineering		
Course title:	Surveying techniques in Geodesy		
Level:	Bachelor		
Course Status:	Elective		
Year of Study:	Year 2, Semester 3		
Number of Classes per Week:	2+1		
ECTS Credits:	3		
Time /Location:	According to the Timetable		
Teacher:	Prof. Ass. Dr. Ymer Kuka		
Contact Details:	e-mail: ymer.kuka@uni-pr.edu www.fn.uni-pr.edu		
Course Description:			
	Within this course will be developed basic knowledge about the shape of the earth, practical geodesy and the goal of geodetic surveying. Initially will be developed basic knowledge of measurement methods and how to calculate the coordinates of unknown points, coordinate systems in geodesy, main tasks of geodesy, the development of polygonal networks, the application of geodesy in construction facilities, stake out of engineer buildings. The course ends with the development of basic knowledge on GPS and its application in geodetic surveying for different purposes.		
Course Goals:			
	To achieve theoretical and practical knowledge in the field of practical geodesy and field surveying.		
Expected Learning Outcomes:			
	After completion of this course, students should be able to: <ul style="list-style-type: none"> - Develop basic knowledge on solving problems related with geodesy - To be familiar with main methods of geodetic surveying and its application in civil engineering. - To be familiar with surveying geodetic equipment's 		
Student Workload (should be in compliance with student's Learning Outcomes)			
Activity	Hours	Day/ Week	Total
Lectures	2	15	30
Theory/ Lab Work/Exercises	2	15	30
Practical Work	1	10	10
Consultations with the teacher	5	1	5
Field Work	1	5	5
Test, seminar paper	1	15	15
Homework	1	15	15
Self-study (library or home)	1	10	10
Preparation for final exam	1	15	15
Assessment time (test, quiz, final exam)			
Projects, presentations, etc.	1	15	15
Total			150

Teaching Methods:	-Lecture -Discussion during lectures -Exercises -Work in group
Assessment Methods:	In evaluation, the percentage of the attendance of each partial evaluation in the final evaluation must be determined. One of the ways of evaluation would be: First Evaluation: 15% Second Evaluation: 15% Homework or other engagement: 10% Attendance 5% Final Exam 55% Total 100%

Primary Literature:	1) Kahmen, H. Vermessungskunde, Berlin, 2005 2) Bencic, D. Instrumentet për matje dhe sistemet ne gjeodezi dhe gjeoinformatik
Additional Literature:	1) Nela, K. Gjeodezia e pergjithshme, Prishtine, 2000

Designed teaching plan	
Week	Title of the Lecture
Week 1:	Base definitions and main principles of land surveying
Week 2:	Establishment of geodetic networks for land surveying purposes, surveying methods and measurement units
Week 3:	Coordinate system of mapping. Gauss-Kryger projection
Week 4:	Main definitions of triangulation
Week 5:	Main definitions of GPS surveying methods.
Week 6:	Polygonometric geodetic networks connected with two sides with known coordinates, closed and sightless
Week 7:	Connection with inaccessible point. Site visit and establishment of point monuments
Week 8:	Angle measurement in polygonometry and reasons of errors during measurements. Setting accuracy in advance and max error allowed
Week 9:	Linear measurement in poligonometry. Distance measurements by theodolite
Week 10:	Application of surveying in engineer buildings
Week 11:	Stake out of engineering buildings
Week 12:	Levelling. Main principles of calculations in levelling.
Week 13:	Causes of insecurity to levelling. The levelling network connection to point of a higher order. Calculation of the levelling network.
Week 14:	Deformation analysis of engineering buildings
Week 15:	Modern methods of surveying in civil engineering and architecture. GPS, laser scanning, photogrammetry

Academic Policies and Code of Conduct	
1.	<i>Regular attendance of lectures and exercises</i>
2.	<i>Being quiet during the sessions</i>
3.	<i>Shutting down mobile phones</i>
4.	<i>Being on time</i>

Note | If a student has more than 3 class assignments evaluated below 50% he/she loses the right on taking the final exam. Evaluation is done from 0-100 %.