

## Course title :

Course Basic Information			
Academic Unit:	Faculty of Civil Engineering		
Course title:	Geodetic Instruments		
Level:	Bachelor		
Course Status:	Mandatory		
Year of Study:	Year 1, Semester 1		
Number of Classes per Week:	2+2		
ECTS Credits:	6		
Time /Location:	According to the Timetable		
Teacher:	Prof.Ass.Dr. Ismail Kabashi		
Contact Details:	Ismail.kabashi@uni-pr.edu		
<b>Course Description:</b>			
	The course begins with the basic knowledge for geodetic instruments, geodesy definitions, basics of optics to geodetic instruments and then continues with the influence of the paralaks in measurements, axle errors of instruments and electronic measurements, ends up with the Laser Instruments.		
<b>Course Goals:</b>			
	The main objective of this course is to develop basic knowledge on main duties of geodetic instruments.		
<b>Expected Learning Outcomes:</b>			
	After finishing this course the student should be able to: <ul style="list-style-type: none"> <li>- Gain basic knowledge in the geodetic instruments</li> <li>- To make the setup of level and total station</li> <li>- To understand the way how some of the geodetic instruments are working</li> </ul>		
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	15	15
Study for intermediate test	1	13	13
Consultations with the teacher	1	15	15
Field Work			
Test, seminar paper	4	2	8
Homework	1	13	13
Self-study (library or home)	1	13	13
Preparation for final exam	1	15	15
Assessment time (test, quiz, final exam)			
Projects, presentations, etc.			
<b>Total</b>			<b>152</b>
<b>Teaching Methods:</b>			
	<ul style="list-style-type: none"> <li>- Lecture</li> <li>- Discussion during lectures</li> </ul>		

	<ul style="list-style-type: none"> <li>- Exercises</li> <li>- Work in group</li> </ul>
<b>Assessment Methods:</b>	<p>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:</p> <p>First Evaluation: 10%  Second Evaluation: 10%  Homework or other engagement: 5%  Attendance 20%  Final Exam 55%  Total 100%</p>

<b>Primary Literature:</b>	1. Mjerni instrumenti i sustave u geodeziji i geoinformatici Bencic, D. Solaric, N. Skolska knjiga, Zagreb (2008)
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<b>Additional Literature:</b>	1) Nela, K.: Gjeodezi Praktike II, 2005
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<b>Designed teaching plan</b>	
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<b>Week</b>	<b>Title of the Lecture</b>
<b>Week 1:</b>	Basic knowledge with geodetic instruments
<b>Week 2:</b>	Measurement in geodesy and measurements errors
<b>Week 3:</b>	Basics of optics to geodetic instruments
<b>Week 4:</b>	The main parts of geodetic instruments
<b>Week 5:</b>	Dyallabic and its optical characteristics
<b>Week 6:</b>	Description of vision and the influence of the paralaks
<b>Week 7:</b>	The main characteristics of spherical and cylindrical swelling
<b>Week 8:</b>	Basic knowledge of theodolite and level First valuation
<b>Week 9:</b>	Basic conditions of theodolite and level
<b>Week 10:</b>	Axle errors of instruments and electronic measurements
<b>Week 11:</b>	Main principels of total stations
<b>Week 12:</b>	Methods of controlling geodetic instruments
<b>Week 13:</b>	Calibration of geodetic instruments
<b>Week 14:</b>	Instruments for underground measurements
<b>Week 15:</b>	Laser Instruments Second valuation

<b>Academic Policies and Code of Conduct</b>	
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<ul style="list-style-type: none"> <li>- Regular attendance of lectures and exercises</li> <li>- Being quiet during the sessions</li> <li>- Shutting down mobile phones</li> <li>- Being on time</li> </ul>
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**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 %.**