Course title :

Course Basic Information	
Academic Unit:	Faculty of Civil Engineering
Course title:	GNSS application in positioning and navigation
Level:	Bachelor
Course Status:	Elective
Year of Study:	Year 3, Semester 5
Number of Classes per Week:	2+1
ECTS Credits:	3
Time /Location:	According to the Timetable
Teacher:	Prof.Asoc.Dr. Perparim Ameti
Contact Details:	perparim.ameti@uni-pr.edu + 383 44 244 748

Course Description:	The course begins with basic knowledge on global satellite navigation systems, then continues with knowledge on specific systems like GPS, GLONASS, GALILEO, Compass, and concludes with the methods of applying satellite navigation systems in relevant fields.
Course Goals:	The main purpose of this course is to develop basic knowledge on satellite navigation systems and their application areas.
Expected Learning Outcomes:	After finishing this course the student should be able to understand the fundamental principles of the global satellite systems GNSS in determining the positioning on earth's surface and in navigation for different purposes.

Student Workload (should be in compliance with student's Learning Outcomes)			
Activity	Hours	Day/ Week	Total
Lectures	2	15	30
Theory/ Lab Work/Exercises	1	15	15
Practical Work			
Study for intermediate test	2	2	4
Consultations with the teacher			
Field Work			
Test, seminar paper	1	5	5
Homework	1	3	3
Self-study (library or home)	1	3	3
Preparation for final exam	2	2	4
Assessment time (test, quiz, final exam)			
Projects, presentations, etc.	1	15	15
Total			79

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) LEICK, A. GPS satellite surveying. New York: Wiley&Sons, 1994. 2) HEFTY, J. – HUSÁR, L. Družicová geodézia : Globálny polohový systém. Bratislava: STU v Bratislave, 2008. 186 p.
Additional Literature:	

Designed teaching plan	
Week	**Title of the Lecture**
Week 1:	Fundamental knowledge of satellite global systems
Week 2:	Working principles in GNSS
Week 3:	Satellite functioning, their orbits and their signals
Week 4:	Fundamental knowledge on GPS
Week 5:	Fundamental knowledge on GLONASS
Week 6:	Fundamental knowledge on Compas
Week 7:	Codes and measurement phases in GNSS
Week 8:	Types of GNSS receivers First valuation
Week 9:	Absolute and relative positioning
Week 10:	Applying GNSS in geodesy, GIS and navigation
Week 11:	Coordinative systems used from satellite systems and global navigations
Week 12:	Applying satellite system in geodesy
Week 13:	Applying satellite system in land navigation
Week 14:	Applying satellite system in air navigation
Week 15:	Applying satellite system in sea navigation Second valuation

Academic Policies and Code of Conduct

- Regular attendance of lectures and exercises
- Being quiet during the sessions
- Shutting down mobile phones
- Being on time

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