Course title :

Course Basic Information	
Academic Unit:	Faculty of Civil Engineering
Course title:	Satellite positioning
Level:	Bachelor
Course Status:	Mandatory
Year of Study:	Year 3, Semester 5
Number of Classes per Week:	2+2
ECTS Credits:	6
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:	Subject starts with an introduction to the satellite geodesy, definitions and branches of satellite geodesy, positioning and navigation through satellites, continues with the laws of Kepler on the movement of satellites, satellite systems for space purposes, monitoring of geodynamic through GPS, continues with the definition and deployment of systems geodetic reference via satellites, basic knowledge on global positioning system (GPS), GPS measurement methods through it, post processing and adjustment of geodetic networks established through satellite measurements. The course finishes with the development of knowledge on the establishment of state geodetic networks via GPS.
Course Goals:	To achieve theoretical and practical knowledge in geodetic measurements by satellite signals.
Expected Learning Outcomes:	After completing this course the student will be able to: 1. Develop base knowledge in solving the problems of satellite geodesy 2. Knowledge base determined by GPS surveying it 3. To develop various professional projects independently

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			
Study for intermediate test	1	13	13
Consultations with the teaher	1	15	15
Field Work			
Test, seminar paper	4	2	8
Homework	1	15	15

Self-study (library or home)	1	15	15
Preparation for final exam	1	15	15
Assessment time (test, quiz, final exam)			
Projects, presentations, etc.	1	15	15
Total			**156**

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) Isufi, E.: Sistemi i Pozicionimit Global - GPS, 2006. 2) Seber, G.: Satellite Geodesy 2nd Edition, Walter de Gruyter, 2003
Additional Literature:	1. Torge, W.: Geodesy, 3rd Edition, Walter de Gruyter, 2001.

Designed teaching plan

Week	Title of the Lecture
Week 1:	Introduction to the satellite geodesy, definition and allocation of satellite geodesy. Positioning and Navigation through satellites
Week 2:	Basic concepts of cosmic mechanics.
***Week 3*:**	Kepler's laws of motion of the satellites and the laws of gravity
Week 4:	GEO satellite systems for space purposes
Week 5:	Follow geodynamic through GPS
***Week 6*:**	Satellite missions for geophysical purposes
Week 7:	Navigation satellite systems
Week 8:	World geodetic referent systems WGS First valuation
Week 9:	Defining and establishing geodetic reference systems through satellites
Week 10:	Global positioning system (GPS). The concept and operation of the GPS. Signals and effects in signal filtering and processing of the satellite signal
***Week 11*:**	Methods of measurements through GPS. Static and kinematic methods of measurement and application in geodesy

***Week 12*:**	Geodetic measurements for state purposes. VLBI and establishment of geodetic datum
***Week 13*:**	Post processing and network adjustment
***Week 14*:**	Transformation of coordinates observed through GPS and conversion into specific systems
***Week 15*:**	Designing and adjustment of state geodetic networks established by GPS 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 %.