Course title :

Course Basic Information	
Academic Unit:	Faculty of Civil Engineering
Course title:	Photogrammetry
Level:	Bachelor
Course Status:	Mandatory
Year of Study:	Year 2, Semester 4
Number of Classes per Week:	2+2
ECTS Credits:	6
Time /Location:	According to the Timetable
Teacher:	Prof. Dr. Murat Meha
Contact Details:	murat.meha@uni-pr.edu 044 120 958
Course Description:	Introduction, concept, and definition of photogrammetry. Foundations of photography and reflection. Camera and photographical systems. Image measurements, coordinative systems in Photogrammetry. Transformation of plane coordinates. Terrestrial Photogrammetry, photographing devices, application. Aerial Photogrammetry, equipment, terrain preparations for photographing. Introduction to the concept and definition of Photogrammetry. Basis and principles of photography. Stereo Photogrammetry, eyes, stereoscopic observation, subjective model, stereo measurement's principles, analytical and digital systems.
Course Goals:	Through this course, the students are able to acquire fundamental theoretical knowledge for photogrammetry as a scientific discipline serving for geodesy and that starting from the analogue and digital photo to satellite images. To learn that photogrammetry is the art and science of determining the position and objects' shapes from the form in the photos, be it analogue or digital.
Expected Learning Outcomes:	1. Differentiate between analogue and digital apparatus. 2. To distinguish between photography taken with camera and those taken from aerial photogrammetry 3. To be able to plan measurements 4. To calculate parameters that affect the photo's quality 5. To distinguish between satellite image and terrestrial ones

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 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.	1	15	15
Total			**152**

Teaching Methods:	Lecture with Power Point presentations, discussions, exercises, workshops, seminar semester with concrete tasks, discussions during lectures, essays semester with the topic, testing etc.
Assessment Methods:	Participation in lectures and exercises: 5% Working seminar: 5% First colloquium: 10% Second Colloquium: 10% Final exam: 70% Total: 100%
Primary Literature:	1. Kraus, K.: Fotogrametria, Libri1., përkthim në gjuhën shqipe, Tiranë, 2009.
Additional Literature:	1. Linder W.: (2009): Digital Photogrammetry

Designed teaching plan

Week	Title of the Lecture
Week 1:	Introduction to photogrammetry, definition, history and its development
Week 2:	Mathematical preliminary knowledge, rotation plans, rotation in space, rotation matrix properties.
***Week 3*:**	Central projection in space, central projection of a plan, projection of a straight line restitution, restitution normal case two files.
Week 4:	Cameras, photography and photogrammetry planning Internal orientation.
Week 5:	Photographic aspects, colors and filters, processes photographic, black and white photographs. Brightness effective in photos.
***Week 6*:**	Films for aerial photos, copying with contrast control Acuteness of the image, moving image
Week 7:	Terrestrial metric cameras, stereo metric cameras Independent metric cameras.

Week 8:	Planning and implementation of land photogrammetry First evaluation The qualifying first colloquium
Week 9:	Metric aerial cameras, request for aerial cameras.
Week 10:	Flight planning,
***Week 11*:**	Stereo-restitution, with external orientation known, in stereo plotter analog, with external orientation unknown
***Week 12*:**	Stereo plotter and some restitution procedures, stereoscopic observation systems, meter parallax, stereo plotter analytical universal and analog, Accuracy of data reception.
***Week 13*:**	Photogrammetric triangulation, ortophoto, distortions of photos metric, different methods of data collection, format of ortophoto.
***Week 14*:**	Digital photogrammetry, creation of digital images, digitalization of photos, digital cameras
***Week 15*:**	

Academic Policies and Code of Conduct
The teacher sets the criteria for regular attendance at lectures and exercises and rules of etiquette as: quieting in the lesson, disconnection of mobile phone, entrance in lesson in time, mutual respect, and application of the principle one speaks everyone listens etc.

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 %.