

COURSE		PHOTOGRAMMETRY I		
LECTURER		Assoc. Prof. Admir Mulahusić Ph.D.		
STUDY	STATUS	SEMESTER	NUMBER OF LESSONS L+E	ECTS
B – G	Compulsory	3	2+3	6
OBJECTIVES				
□ Introduction in practical tasks of photogrammetric survey.				
LEARNING OUTCOMES				
<ul style="list-style-type: none"> • Understanding the role of photogrammetry in the modern world, knowledge in measuring systems, methods and technology of measurements and collecting of geospatial data. • Knowledge in theoretical principles of photogrammetry, procedures of computational processing and data visualization of the photogrammetric measurements. 				
COURSE CONTENT				
<p>Introduction, term and definition of photogrammetry. Photography, basics of optics, behaviour of light, lens errors, lenses and their main features, photographic emulsions. Film sensitivity, emulsions, gradation and characteristic gradation curve, spectral sensibility, grain size and a power of decomposition, filters for shooting and for the dark chamber. Digital photography, basics, work with digital cameras, software. Cameras and shooting equipment, shooting, forming the latent image, developing, fixing and drying the negatives and positives, types of developers, creation of positives, apparatus for copying and amplification, photo paper and its treatment. Color photography, basic principles, advantages and disadvantages. Elements of individual images, inner and outer orientation, types of images for plain and stereophotogrammetry. Image as the central projection, image coordinate system, geometrical relationship between image and terrain, transformation formula. Terrestrial photogrammetry, equipment. Phototheodolites, formats of images, focal length, field of view, luminous intensity, photo layers. Digital cameras, amateur cameras - applications. Shooting, size and base tilt, stereoscopic observations, positional and height accuracy, planning and execution. Close-range photogrammetry, purpose and principles, stereometric cameras, control points. Aerophotogrammetry, means of transport, orientation devices for navigation, the instruments for data of outer orientation, types of cameras, analogue cameras, digital cameras. Shooting, weather, scale, overlapping and the required number of images, the choice of camera, flight planning. Control points in aerophotogrammetry, layout, number, stabilization, photo-signalization, signalization, geodetic positioning, accuracy of control points. Interpretation of aerophotogrammetric images. Decryption, photoimages, data collection for the names, classes, etc.</p>				
RECOMMENDED LITERATURE				
1. Kraus, K.: <i>Fotogrametrija - Knjiga 1</i> , prijevod na hrvatski jezik, Zagreb-Sarajevo, 2006.				
<p>Examination: Exam is in a written form:</p> <ul style="list-style-type: none"> - First midterm exam is organized in the 8th week of classes. - End-of-term exam is organized in the period of the final exam (and second final exam for students who do not pass end-of-term exam in the term of the final exam), and is accessed only by students who have passed first midterm exam. - Final exam is organized according to the academic calendar, and accessed by students who did not pass first midterm exam and students who are not satisfied with the success at the first midterm exam. - Second final exam is organized according to the academic calendar, and accessed by students who did not pass first midterm exam, students who are not satisfied with the success at the first midterm exam, as well as students who are not satisfied with the success at the final exam. <p>It is considered that the student has passed the exam if he achieved at least 55% of the total score at the exam. A prerequisite for taking the exam is school attendance, as well as accepted all exercises by the assistant.</p>				