

COURSE INFORMATION LETTER

University: P. J. Šafárik University in Košice	
Faculty: Faculty of Science	
Course ID: ÚGE/ LHS/21	Course name: Aerial laser and hyperspectral scanning
Course type, scope and the method: Course type: Lecture / Practice Recommended course-load (hours): Per week: 1 / 2 Per study period: 14 / 28 Course method:	
Number of ECTS credits: 5	
Recommended semester/trimester of the course: II. (Master)	
Course level:	
Prerequisites:	
Conditions for course completion: <p>Those interested in completing the course are recommended to have mastered the basics of cartography, geographic information systems and remote sensing. However, it is not a necessary condition. The evaluation is based on a combination of continuous control during the exercises and the exam. Continuous control is carried out during the teaching part in the form of the development of 2 team semester projects evaluated in the range of 0 - 100 points.</p> <ul style="list-style-type: none"> • During the exercises, the activity is evaluated in the form of answers to the questions of the exerciser or quizzes, while 0-10 points can be obtained for one activity out of a total of 10, for a maximum of 100 points. • To solve the semester project, students are divided into teams of 2-3 people. The student team determines the topics (focus) of the semester project by itself in the first third of the semester for the lidar part and in the second third of the semester for the hyperspectral scanning part, based on the knowledge from the lectures and exercises and the agreement of the team members. The assessed output of the project is a text report on the solution of the assigned task, a sample of input and final data (10 minutes) and a presentation of the project by all team members (10 minutes). The project report (about 1500 words and graphic attachments) is handed in and the presentation is made at the end of the teaching part of the semester as part of the exercises. Each team member can get 0-100 points for the project and its presentation. • The first semester project concerns the processing of data from aerial laser scanning and their application in solving a specific problem. • The second semester project concerns the processing of hyperspectral data and its application in the solution of a specific problem that is proposed and solved by the team. • During the exam period, a written exam focusing on the theoretical and methodological aspects of aerial laser scanning and hyperspectral scanning is carried out in the scope of 4 questions, in which an explanation of basic topics from theory and methodology, practical problems and applications is expected. A student who has obtained at least 50 points for each form of assessment in the teaching part (in the interim control) can apply for the exam. • The final evaluation of the subject is determined as the arithmetic average of the evaluation for active participation in the exercises, 2 semester projects and 1 final exam. Credits will only be awarded to a student who achieves at least 50 points out of 100 in each part of the assessment. For the final evaluation of the subject, the evaluation scheme applies: A (100-90 points), B (80-89 points), C (70-79 points), D (60-69 points), E (50-59 points), FX (0-49 points). 	
Learning outcomes: Knowledge: knowledge of theoretical and methodological aspects of aerial laser scanning and passive hyperspectral scanning and the possibilities of their application in practice; Skills: The	

<p>student will acquire practical skills in advanced processing, analysis and visualization of digital lidar and hyperspectral data for use in geographic information systems;</p> <p>Competences: The student masters the key steps in the process of obtaining lidar and hyperspectral data, acquires the ability to critically evaluate the advantages and disadvantages of this data for various applications, creating team assignments will improve the ability of teamwork and the ability to present its results.</p>
Brief outline of the course:
Recommended literature:
Course language:
Notes:
<p>Course assessment Total number of assessed students: 10</p>
Course assessment is visible only in case of include the course to some study plan.
Provides: doc. Mgr. Michal Gallay, PhD.
Date of last modification: 22.04.2021
Approved: