

Module description

Module title					Abbreviation
Photogrammetric Machine Vision 10-LURI=PHOTO-232-mo1					
Module coordinator				Module offered by	
holder of the Chair of Computer Scienc			e XVII Institute of Computer Science		
ECTS	CTS Method of grading		Only after succ. compl. of module(s)		
5	nume	rical grade			
Duration		Module level	Other prerequisites		
1 semester graduate		graduate			
Contents					
(1) What is Photogrammetry? (2) Cameras (3) Homogeneous Coordinates (4) Camera Parameter (5) Direct Linear Transform (6) Spatial Resection (7) Relative Orientation and Fundemental Matrix (8) Epipolar Geometry (9) FE-di- rect (10) Iterative-Solution (11) Triangulation (12) Multiview (13) Aerial photography (14) Orthophoto (15) Finding Corresponding Points (16) Matching					
Intended learning outcomes					
Students understand that photogrammetry means measuring in and with photos. They have learned the steps to calculate 3D information from 2D images and are able to evaluate accuracies. The know the limits of 3D computer vision.					
Courses (type, number of weekly contact hours, language — if other than German)					
V (2) + Ü (2) Module taught in: German and/or English					
Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)					
written examination (approx. 60 to 120 minutes) If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (ap- prox. 15 minutes per candidate). Language of assessment: German and/or English Creditable for bonus					
Allocation of places					
Additional information					
Workload					
150 h					
Teaching cycle					
Referred to in LPO I (examination regulations for teaching-degree programmes)					
Module appears in					
Master's degree (1 major) Aerospace Computer Science (2023) Master's degree (1 major) Artificial Intelligence & Extended Reality (2024) Master's degree (1 major) Artificial Intelligence (2024)					

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