Module title			Abbreviation
On board data processing			10-I-BDV-152-m01
Module coordinator		**Module offered by**	
holder of the Chair of Computer Science VIII		Institute of Computer Science	
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
8	numerical grade	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	undergraduate	--	

Contents

Tasks of onboard data handling systems (ODHS), components of ODHS, interfaces to other subsystems, division into hardware and software tasks, system architecture, topologies, reliable systems, fault tolerance, real-time programming, real-time operating systems, typical onboard software applications, implementing of example applications, hardware support.

Intended learning outcomes

The students understand what the tasks of ODHS are and how they are implemented. They understand the connections and dependencies with and from other subsystems. They are able to implement and control such systems themselves.

Courses (type, number of weekly contact hours, language — if other than German)

V (4) + Ü (2)

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. 120 minutes) and approx. 6 practical exercises (approx. 4 hours each), weighted 1:1 creditable for bonus

Allocation of places

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Additional information

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Workload

240 h

Teaching cycle

Teaching cycle: every year, summer semester

Referred to in LPO I (examination regulations for teaching-degree programmes)

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Module appears in

Bachelor's degree (1 major) Aerospace Computer Science (2015)
Bachelor's degree (1 major) Aerospace Computer Science (2017)
Bachelor's degree (1 major) Aerospace Computer Science (2020)