

Module title		Abbreviation
Design of Planetary Bases and Orbital Stations		10-I=EPB-182-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)
10	numerical grade	--
Duration	Module level	Other prerequisites
1 semester	graduate	--
Contents		
<p>In light of future human settlements across the solar system, this lecture will focus on the special aspects of planning of planetary bases. This will train the planning of a very complex spacecraft apart from its individual components like satellites. The content will be decided upon each semester (for example lunar base, mars base etc) The most important aspects like motivation, goals, prerequisites, constraints, environment, localization, construction and operation scenarios, planning of modules and structures, lifesupport, energy, communication, production, transport between earth and moon as well as mobility on the surface of the moon will be conceptually laid out and analyzed.</p>		
Intended learning outcomes		
<p>The students gain fundamental knowledge about the planning of planetary bases and orbital bases. They are able to analyse the elementary aspects of planning, pose requirements and consider the system design. With the support of the acquired knowledge of methods they are able to create dedicated tools and processes to support the planning in the area of planetary bases and orbital stations. Also projectmanagement for the development of planetary bases and orbital stations will be trained.</p>		
Courses (type, number of weekly contact hours, language – if other than German)		
R (6)		
Method of assessment (type, scope, language – if other than German, examination offered – if not every semester, information on whether module is creditable for bonus)		
<p>project report (10 to 15 pages) and presentation of project (15 to 30 minutes) Assessment offered: In the semester in which the course is offered (The project will not be repeated; there will not be another project with the same topic. Assessment can, therefore, only be offered for the project offered in the respective semester.) Language of assessment: German and/or English</p>		
Allocation of places		
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Additional information		
<p>Focuses available for students of the Master's programme Informatik (Computer Science, 120 ECTS credits): LR. Cf. Section 3 Subsection 3 Sentence 8 FSB (subject-specific provisions).</p>		
Workload		
300 h		
Teaching cycle		
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Referred to in LPO I (examination regulations for teaching-degree programmes)		
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Module appears in		
<p>Master's degree (1 major) Computer Science (2018) Master's degree (1 major) Computer Science (2021) Master's degree (1 major) Computer Science (2023)</p>		

