

Real-Time Operating Systems Design and Implementation					AR-315
Rota annually SS	Duration 1 Semester	Semester 3rd (Semester)	SWS 4 SWS	Credit Points 6	Workload 180 h
1	Modul Structure				
	Course (Abbreviation)	Type/ SWS	Presence	Self Study	Credit Points
	a) Real-Time Operating Systems Design and Implementation	Lecture/ 2 SWS	25 h	65 h	3
	b) Real-Time Operating Systems Design and Implementation	Tutorial/ 2 SWS	25 h	65 h	3
2	Language English				
3	Content Real-time systems play a crucial role in many modern applications and systems, especially when data processing units need to be integrated into physical systems. This module provides basic and advanced knowledge about real-time systems themselves and their application. The events in this module cover the design and analysis to ensure compliance with real-world system conditions. This knowledge is deepened and practiced in the exercises. The module is particularly suitable for students who are interested in research around Cyber Physical Systems and Embedded Systems. Literature: Slides				
4	Competencies The students understand the basic concepts for the design and analysis in real-time systems, in particular worst-case analyzes. Students should be enabled to apply current procedures for verifying the schedulability of real-time systems and scheduling algorithms.				
5	Examination Requirements The final exam will be an oral exam.				
6	Formality of Examination <input checked="" type="checkbox"/> Module Finals <input type="checkbox"/> Accumulated Grade				
7	Module Requirements (Prerequisites) Required knowledge: Solid knowledge of embedded systems, basic knowledge of Operating Systems and C Programming				
8	Allocation to Curriculum: Program: Automation & Robotics, Field of study: Robotics, Cognitive Systems				
9	Responsibility/ Lecturer Prof. Dr. J. Chen/Prof. Dr. J. Chen				