Real-Time Operating Systems Design and Implementation					AR-315
Rota	**Duration**	**Semester**	**SWS**	**Credit Points**	**Workload**
annually WS	1 Semester	3rd (Semester)	4 SWS	6	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** ☒ Module Finals ☐ 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				