

Online Problems					AR-316
Rota annually WS	Duration 1 Semester	Semester 3rd (Semester)	SWS 3 SWS	Credit Points 5	Workload 150 h
1	Modul Structure				
	Course (Abbreviation)	Type/ SWS	Presence	Self Study	Credit Points
	a) Online Problems	Lecture/ 2 SWS	25 h	65 h	3
	b) Online Problems	Tutorial/ 2 SWS	10 h	50 h	2
2	Language English				
3	Content 1. Competitive Analysis 2. Randomized Algorithms 3. Deterministic Algorithms 4. Game-Theoretic Foundations 5. Request-Answer Games Literature: Allan Borodin, Ran El-Yaniv, ONLINE COMPUTATION AND COMPETITIVE ANALYSIS. Cambridge University Press.				
4	Competencies The students identify online problems and their characteristics. They are able to apply suitable methods to find algorithmic solutions. They can evaluate approaches with respect to efficiency, performance and complexity. They know how to design new online algorithms based on the knowledge acquired during the lecture.				
5	Examination Requirements The final exam will be an oral or written exam.				
6	Formality of Examination <input checked="" type="checkbox"/> Module Finals <input type="checkbox"/> Accumulated Grade				
7	Module Requirements (Prerequisites) Recommended: knowledge in discrete mathematics and foundations of algorithms				
8	Allocation to Curriculum: Program: Automation & Robotics, Field of study: Robotics, Cognitive Systems				
9	Responsibility/ Lecturer <i>Prof. Dr.-Ing. Uwe Schwiegelshohn/Prof. Dr.-Ing. Uwe Schwiegelshohn</i>				