Logistics of Chemical Production Processes					AR-222
Rota annually SS	**Duration** 1 Semester	**Semester** 2nd (Semester)	**SWS** 2 SWS	**Credit Points** 3	**Workload** 90 h

1	**Modul structure**				
	Course (Abbreviation)	**Type/ SWS**	**Presence**	**Self study**	**Credits**
	a) Logistics of Chemical Production Processes	Lecture / 1 SWS	15 h	30 h	2
	b) Logistics of Chemical Production Processes	Tutorial / 1 SWS	15 h	30 h	1
2	**Language** English				
3	**Content** The students obtain an overview of supply chain management and planning and scheduling problems in the chemical industry and of techniques and tools for modeling, simulation and optimization. These include discrete event simulation, equation-based modeling, mixed-integer linear programming, heuristic optimization methods and modeling and optimization using timed automata. **Literature:** • Handouts • Slides				
4	**Goals** The students will be enabled to identify logistic problems, to select suitable tools and techniques for simulation and optimization and to apply them to real-world problems.				
5	**Examination Requirements** The final exam will be an oral (20 minutes) or written (1.5 hours) exam, depending on the number of participants (form will be announced in the second week of the course). In addition, active participation and collaboration in 3 computer exercises is required.				
6	**Formality of Examination** ☒ Module Finals ☐ Accumulated Grade				
7	**Module Requirements (Prerequisites)** -				
8	**Allocation to Curriculum:** Program: Automation & Robotics, Field of study: Process Automation				
9	**Responsibility/ Lecturer** *Prof. Dr. S. Engell/* Prof. Dr. S. Engell				