Scientific Programming with Matlab in Engineering					AR-105
Rota annually WS	**Duration** 1 Semester	**Semester** 1st (Semester)	**SWS** 3 SWS	**Credit Points** 3	**Workload** 90 h

1	**Modul Structure**				
	Course (Abbreviation)	**Type/ SWS**	**Presence**	**Self Study**	**Credit Points**
	a) Scientific Programming with Matlab in Engineering (SPM)	Lab/ 3 SWS	35 h	55 h	3
2	**Language** English				
3	**Content** 1. Matlab Basics, Programming, Visualization 2. Symbolic Computing 3. Statistics 4. Numerical Optimisation 5. Control System Design 6. Simulink 7. Robotics **Literature:** • Matlab documentation				
4	**Competencies** The course qualifies the students to solve scientific programming and engineering problems with Matlab. The students acquire deeper knowledge in the design and application of control systems and robotics.				
5	**Examination Requirements** Successful completion of 75% of programming assignments and Successful completion of 50% of quizzes The course grading is pass or fail.				
6	**Formality of Examination** ☐ Module Finals ☐ Accumulated Grade				
7	**Module Requirements (Prerequisites)**				
8	**Allocation to Curriculum:** Mandatory Course Program: Automation & Robotics				
9	**Responsibility/ Lecturer** *apl. Prof. Dr. F. Hoffmann/* apl. Prof. Dr. F. Hoffmann				