

Learning in Robotics					AR-310
<b>Rota</b> annually SS	<b>Duration</b> 1 Semester	<b>Semester</b> 2nd (Semester)	<b>SWS</b> 3 SWS	<b>Credit Points</b> 5	<b>Workload</b> 150 h
<b>1</b>	<b>Modul structure</b>				
	<b>Course (Abbreviation)</b>	<b>Type/ SWS</b>	<b>Presence</b>	<b>Self study</b>	<b>Credits</b>
	a) Learning in Robotics (LIR)	Lecture/ 2 SWS	30 h	60 h	3
	b) Learning in Robotics (LIR)	Tutorial/ 1 SWS	15 h	45 h	2
<b>2</b>	<b>Language</b> English				
<b>3</b>	<b>Content</b> <ol style="list-style-type: none"> <li>1. Nonlinear System Identification</li> <li>2. Learning Robot Kinematics and Dynamics</li> <li>3. Learning Visual-Motor Coordination</li> <li>4. Dynamic Programming</li> <li>5. Reinforcement Learning</li> <li>6. Evolutionary Robotics</li> <li>7. Learning from Demonstration</li> </ol> <b>Literature:</b> Slides				
<b>4</b>	<b>Goals</b> The students acquire a profound knowledge of unsupervised and supervised learning in robotic manipulation as well as mobile robotics.				
<b>5</b>	<b>Examination Requirements</b> Practical assignments and oral exam.				
<b>6</b>	<b>Formality of Examination</b> <input checked="" type="checkbox"/> Module Finals <span style="float: right;"><input type="checkbox"/> Accumulated Grade</span>				
<b>7</b>	<b>Module Requirements (Prerequisites)</b>				
<b>8</b>	<b>Allocation to Curriculum:</b> Program: Automation & Robotics, Field of study: Robotics, Cognitive Systems				
<b>9</b>	<b>Responsibility/ Lecturer</b> <i>Prof. Dr. Torsten Bertram/Dr. Frank Hoffmann</i>				