

## Automation Technology II

<b>Module Title</b>		<b>Automation Technology II</b>				
<b>Module Title in German</b>		<b>Automatisierungstechnik II</b>				
<b>Module Leader</b>		<b>Prof. Dr.-Ing. Kourosh Kolahi</b>				
<b>Teaching Staff</b>		<b>Prof. Dr.-Ing. Kourosh Kolahi, Prof. Dr.-Ing. Kai Daniel</b>				
<b>Course Language</b>		<b>English</b>				
<b>Code</b> ATII	<b>Workload</b> 180 h	<b>Credits</b> 6	<b>Semester</b> 6. Semester	<b>Semester Offered</b> Every Summer Semester	<b>Duration</b> 1 Semester	
<b>1</b>	<b>Type of Course</b> Laboratory: 4 h/week	<b>Scheduled Learning</b> 60 h	<b>Independent Study</b> 120 h	<b>Approx. Number of Participants: 15</b>		
<b>2</b>	<b>Learning Outcomes / Competences</b> <b>Upon successful completion of this module, students</b> <ul style="list-style-type: none"> <li>independently structure complex relationships,</li> <li>abstract, describe and analyse practical problems,</li> <li>independently apply automation tools and methods,</li> <li>are capable of independently offering practical solutions to different automation problems,</li> <li>apply real experimental setups and critically evaluate the results, and</li> <li>are able to improve automation systems.</li> </ul>					
<b>3</b>	<b>Content</b> <ul style="list-style-type: none"> <li>Control of a traffic light system</li> <li>Control of an elevator system</li> <li>Feedback control of a three-tank system</li> <li>Feedback control of a pendulum (state control with disturbance observer)</li> <li>Active vibration damping</li> </ul> <p>In the current semester, we offer further practical projects.</p>					
<b>4</b>	<b>Teaching Methods</b> <b>Laboratory in small groups</b>					
<b>5</b>	<b>Content-Related Module Prerequisites</b> <b>Module Prerequisites</b> Basic knowledge of the subjects of the first five semesters					
<b>6</b>	<b>Formal Module Prerequisites</b> <b>None</b>					
<b>7</b>	<b>Type of Exams</b> Graded protocols and oral exam					
<b>8</b>	<b>Prerequisite for the Granting of Credits</b> Successful participation + passing the exam					
<b>9</b>	<b>This Module Appears in:</b> Elektrotechnik_BPO2012 Elektrotechnik_BPO2014_BPO2015_BPO2019					

	Mechatronics_BPO2013_BPO2019
<b>10</b>	<b>Weighting of Grade in Relationship to Final Grade</b> Weighting equals the proportion of module credits in relationship to the total number of grade-relevant credits
<b>11</b>	<b>Additional Information / Literature</b> Literature will be announced project-specific every semester.