

Master Program Automation and Control (AUT)

Contents and Curriculum

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Our master program **Automation and Control (AUT)** deals with steering and controlling of complex systems such as production lines, distributed grids, or on-chip / on-board architectures. Safety and security are two fundamental design paradigms for this discipline.

During your master studies here at the University of Kaiserslautern (TUK), you will gain deep knowledge in the areas of control theory, modeling and identification, development of safe and secure systems, and mechatronic systems.

A key difference to many competitive programs at other universities is the large degree of freedom you have regarding the selection of elective courses. Besides taking regular modules, you can also carry out specific projects, for instance in cooperation with local industry. In total, there is a high flexibility for you to create your own very personal profile during your studies for your future in industry or academia.

Curriculum

AUT consists of a core part and an elective part of courses. The core part is reflected in the study plan below.

In the elective part, you can select from:

- A wide range of modules from the EIT department,
- Subject-related modules from other TUK departments, and
- Individual projects, carried out either at a TUK chair or in industry.

Welcome and Getting Started

At the beginning of each semester, we give an introduction session where we present the generic regulations and give further information about the recommended structure and organization of your studies. The date will be announced at the beginning of the semester.

Study Plan

This study plan template is a recommendation for organizing your core and elective courses. Your individual study plan including your selection of elective courses will be designed together with your [model advisor](#).

Subject		Semester		
		1 (WS)	2 (SS)	3 (WS)
	SWS	CP	CP	CP
<u>Theoretical Part</u>				
Control Engineering	2+1	4		
Nonlinear and Adaptive Control	3+1		5	
Digital Signal Processing	3		4	
Robust Control	2	3		
<u>Specialization Subjects</u>				
Methods of Soft Control	2		3	
Dynamische Regelantriebe/ mechatronische Antriebssysteme	2+1		4	
Modeling and Identification	3+1	5		
Laboratory Automation Engineering	4	5		
Seminar	2		3	
Elective Courses		13	11	
Master Thesis	24			30
Total:		30	30	30

Note: SWS means “Semesterwochenstunden” and is a measure for the number of presence hours in the courses (<lecture hours>+<exercise hours>).