Master Program Automation and Control (AUT)

Contents and Curriculum

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Our master program *Automation and Control* 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 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.

1 Contents

AUT consists of a core part and an elective part of courses.

The compulsory subjects are:

- Control Theory
- Nonlinear and Adaptive Controlling
- Digital Signal Processing
- Robust Control
- Mechatronic Systems
- Lab Automation and Control
- Methods of Soft-Control
- Model Identification
- Seminar (with selectable topic)

The elective part can contain the following elements:

- A wide range of modules from the EIT department
- Subject-related modules from other TUK departments

- Individual projects, carried out either at a TUK chair or in industry

You will create an individual study plan that summarizes all elements together with your study model advisor.

2 Welcome and Getting Started

At the beginning of each semester, we give an introduction session where we present the generic study plan and give further information about the recommended structure and organization of your studies.