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| Module name | **Automation Control** |
| Module coordinator/  Module coordinator | Prof. Dr. Bachmann |
| Qualification goals | Students learn about the design, structure and functionality of flexible automation systems from the perspective of automation technology, including selected design methods for such systems. They can apply their knowledge to the design of such systems.  The event mainly conveys  Professional competence 40 %  Methodological competence 50 %  System competence 10 %  Social competence 0 % |
| Module contents | Today, complex automation solutions are highly automated systems that produce the highest quality with maximum performance. The focal points in their realization are: Conception of communication and networking, decentralized system design, selection of suitable techniques and technologies for implementation, design of a heterogeneous structure, control engineering mastery of complex, non-linear system structures, robot integration, statistical process analysis. |
| Teaching methods | Lecture 4 SWS  Analysis and discussion of documented example systems, operational management of systems, seminar-style lecture |
| Requirements for participation | Recommended: Automation Technology, Control Engineering in the Bachelor's program |
| Literature/ multimedia teaching and learning programs | Lecture notes, exercise materials  Documentation, functional and requirement specifications from the companies |
| Textbook author |  |
| Usability |  |
| Workload/  Total workload | Attendance time 60 h + self-study 90 h = 150 h = 5 credit points |
| ECTS and weighting of the grade in the overall grade | 5 ECTS credits |
| Proof of performance | Alternative examination: Preparation of a draft concept in document form with a concluding colloquium for a given example from the subject area of automation control. |
| Semester | 1st semester |
| Frequency of the offer | Every academic year in the winter semester |
| Duration | 4 SWS |
| Type of course  (compulsory, optional, etc.) | Compulsory elective module |
| Special |  |