Universität Stuttgart

Supplementary Application M.Sc. Engineering Cybernetics

This form is not required for graduates of the Bachelor's degree programs in Engineering Cybernetics (Technische Kybernetik) and Mechatronics (Mechatronik) at the University of Stuttgart.

Note on digital accessibility: If you have difficulties completing the supplementary application form, please contact Jonas Mair.

Personal information

First name	Last name
University degree & course of study	Previous University
Current grade[1]	Final grade, if applicable[1]
Best achievable grade[1]	Minimum passing grade[1]
Standard study duration, e.g. in Germany, a Bachelor's degree is designed for 3 years (6 semesters). Please enter the number of years.	Total amount of credit points necessary to complete the Bachelor's degree, e.g. in Germany, a total of 180 credit points is necessary.

Achievements in your previous studies

To summarize your fundamental skills, please fill in the academic courses you have taken which you believe are relevant for the M.Sc. Engineering Cybernetics. You can list a course only once in the three different categories. Please use your institution's credit point system and convert the grades to a numeric value.

Block 1: Mathematics

In this category, include courses focused on mathematical theory and methods (e.g. Calculus, Linear Algebra, Differential Equations, Mathematics for Engineers etc.).

No.	Module title	Credit points	Achieved grade[1]
1.1			
1.2			
1.3			
1.4			
1.5			
1.6			

[1] The grades need to be converted to a numeric value before entering them, e.g., the US often uses a grading system ranging from A to F. This then often translates into A⇒4.0, A-⇒3.7, B+⇒3.3,…,D⇒1.0, F⇒0.0.

Block 2: Modelling

In this category, include courses dealing with the mathematical modeling of dynamical systems (e.g. Engineering Mechanics, Thermodynamics, Electrical Systems, etc).

No.	Module title	Credit points	Achieved grade[1]
2.1			
2.2			
2.3			
2.4			
2.5			
2.6			

Block 3: Systems and Control

In this category, include courses dealing with the analysis and design of dynamic systems and control strategies (e.g. Systems Theory, Control Engineering, Automatic Control, System Dynamics, Control Systems, Signal Processing, etc.).

No.	Module title	Credit points	Achieved grade[1]
3.1			
3.2			
3.3			
3.4			
3.5			
3.6			

Supplementary information on credit point conversion

Please explain how the credit points listed on your certificate or transcript of records are converted into the ECTS system. One ECTS credit corresponds to approximately 30 hours of total workload, including self-study, and one semester typically comprises 30 ECTS credits.

Conversion factor (a numerical value indicating the relationship between your institution's credit points and the ECTS system, e.g., if one credit point at your institution corresponds to 15 hours of work, the conversion factor to ECTS is 2).
Explanation of conversion (this can also be an URL to the conversion rules of your institution)

Specific Contents of your courses

Did you learn about the following topics? If you did, then indicate in which course you learned about it by inserting the respective number from the tables in the blocks 1-3 (e.g. 1.3).

	No.	No.	No.
The rank, determinant and the eigenvalues of a matrix.			
Laplace and Fourier transform.			
Deriving equations of motion for mechanical systems.			
Describing a physical system with differential equations[2].			
Stability and asymptotic stability.			
State space representations of dynamical systems.			
State feedback, controllability and observability.			
Transfer functions and how to check stability.			

[2] This can be any kind of system, e.g., electrical, biological, chemical, etc.