

## Mechatronics (B.Sc.) (as per degree programme guidelines 01.10.2014)

The degree programme consists of 180 Credit Points (CP) in total:

- ▶ **Mandatory Area:** 127 CP ■
- ▶ **Mandatory Laboratories:** 14 CP ■
- ▶ **Optional Subject Area:** 15 CP ■
- ▶ **General Studies:** 12 CP ■
- ▶ **Bachelor's Thesis:** 12 CP ■

**Language of Tuition:**  
**GERMAN**  
*certificates required*

This leads to the following *possible* semester course schedule:

1. Semester	2. Semester	3. Semester	4. Semester	5. Semester	6. Semester
Mathematics I (8 CP)	Mathematics II (8 CP)	Mathematics III (8 CP)	Mathematics IV (8 CP)	Mechanical Components and System Behaviour for Mechatronics (4 CP)	Bachelor's Thesis (12 CP)
Electrical Engineering and Information Technology I* (7 CP)	Electrical Engineering and Information Technology II* (7 CP)	Deterministic Signals and Systems (7 CP)	Computer Aided Design (4 CP)	Logic Design (6 CP)	
Engineering Mechanics I (Statics)* (6 CP)	Engineering Mechanics II (Elastostatics)* (6 CP)	Engineering Mechanics III (Dynamics) (6 CP)	Measuring Technique (4 CP)	Electrical Machines and Drives (5 CP)	
Materials Technology for Mechatronics (3 CP)	General Informatics I (5 CP)	Technical Thermodynamics I (6 CP)	Measuring Technique Lab (2 CP)	System Dynamics and Automatic Control Systems I (6 CP)	Laboratory Course Control of Mechatronic Systems (4 CP)
Electrical Engineering and Information Technology Lab I (4 CP)		Electronics (4 CP)	Hydromechanics (4 CP)	Programming in Automatic Control (C/C++) (2 CP)	Actuators for Mechatronic Systems Lab (4 CP)
Mentoring (1 CP)	General Studies*** (3 CP)	Introductory Project (Projectweek) (2 CP)	Optional Subject Area (15 CP)**		
			General Studies*** (3 CP)	General Studies*** (3 CP)	General Studies*** (3 CP)

\* The exams have to be taken in the respective semester for the first time

\*\* At least 5 CP from the department Electrical Engineering and Information Technology and at least 5CP from the department Mechanical Engineering

\*\*\* All modules from the departments 1, 2, 3, 15 and the Language Resource Center (Sprachenzentrum) as well as particular modules from other departments

Study Programmes

[www.tu-darmstadt.de/studieren](http://www.tu-darmstadt.de/studieren)

hobit – Information fair for pupils

[www.hobit.de](http://www.hobit.de)

TUday – Info day for prospective students

[www.tu-day.de](http://www.tu-day.de)

Online Self-Assessment

[www.osa.tu-darmstadt.de](http://www.osa.tu-darmstadt.de)

Course Schedule

[www.tucan.tu-darmstadt.de](http://www.tucan.tu-darmstadt.de)

Application and Admission for international students  
(International Office)

[www.tu-darmstadt.de/aaa](http://www.tu-darmstadt.de/aaa)

Support and counselling for international students

[www.tu-darmstadt.de/aaa/support](http://www.tu-darmstadt.de/aaa/support)

## Zentrale Studienberatung und -orientierung ZSB (Central Student Advisory)

Karolinenplatz 5, 64289 Darmstadt  
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[www.zsb.tu-darmstadt.de](http://www.zsb.tu-darmstadt.de)

### Opening hours

Tuesday & Thursday 10-12 a.m.  
Wednesday 2-4 p.m.  
Thursday 4-6 p.m.

## Imprint

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# Mechatronics Bachelor of Science

**Mechatronik (MEC) (B.Sc.)**



TECHNISCHE  
UNIVERSITÄT  
DARMSTADT



ZENTRALE  
STUDIENBERATUNG  
UND -ORIENTIERUNG



FACHBEREICH  
MASCHINENBAU

et:it

Fachbereich  
Elektrotechnik und  
Informationstechnik

## Brief Description

Mechatronics is an interdisciplinary branch of engineering at the interface of Mechanical Engineering, Electrical Engineering, and Information Technology. It addresses the development and production of integrated mechanical-electronic systems that automatically collect information and signals, use them to obtain new data, and transform it into forces and movements. Today, mechatronic systems are omnipresent – in the form of active chassis and security systems such as ABS, TCS, and ESP, in industrial robots or in the form of controls for large commercial aircrafts.

[www.mechatronik.tu-darmstadt.de](http://www.mechatronik.tu-darmstadt.de)

## Admission

For information on application deadlines,  
please refer to:  
[www.tu-darmstadt.de/aaa/](http://www.tu-darmstadt.de/aaa/).

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