

**Study Plan Bachelor of Science in Materials Science at TU Darmstadt, Study Regulations 2024 (180 CP)**

Language of Tuition: GERMAN - certificates required

This module overview is a translated and abbreviated easy-to-read version of the official course schedule as defined in the examination regulations, to be found in the "Satzungsbeilagen of TU Darmstadt".

1st Semester	CP CHW	2nd Semester	CP CHW	3rd Semester	CP CHW	4th Semester	CP CHW	5th Semester	CP CHW	6th Semester	CP CHW
Fundamentals of Materials Science (Materials Science I)	FP 6 V4+Ü1	Thermodynamics of Solid State Bodies (Materials Science II)	TE 5 L2+E1	Real Crystals and their Properties (Materials Science III)	TE 5 L2+E1	Mechanical Properties (Materials Science IV)	TE 6 L3+E1	Diffusion in Solid State Bodies (Materials Science V)	TE 5 L2+E1	Functional Properties of Condensed Matter (Materials Science VII)	TE 6 L3+E1
Mathematics I (Civil Eng.)	FP 8 V4+Ü2	Mathematics II (Civil Eng.)	TE 8 L4+E2	Mathematics III (Civil Eng.)	TE 8 L4+E2	Sustainable Material Production and Processing	TE 5 L3	Crystal and Electronic Solid State Structure (Materials Science VI)	TE 5 L2+E1	Structural Materials	TE 6 L4
General Chemistry	FP 5 V2+Ü1	Physical Chemistry I	TE 6 L3+E2	Characterisation Methods in Materials Science	TE 6 L3 + E1	Numerical Methods in Materials Science	TE 3 L1+P1	Seminar: Study project and Scientific presentations	TE 5 P2	Bachelor Thesis and Colloquium	15
Physics I	FP 5 V3+Ü1	Physics II	TE 5 L3+E1	Technical Mechanics for Materials Science	TE 6 L3 + E2	Circular Materials*	TE 5 L2+E1	Machine Learning for Materials Science*	TE 6 L3+E1		
Physics Lab	SLb 3 P3					Introduction to Electrical Engineering	TE 6 L4+E2	Physical Chemistry II	TE 6 L3+E2		
Basic Programming Course	SE 3 Lab4	Basic Materials Science Lab I	SE 3 Lab4	Basic Materials Science Lab II	SE 3 Lab4	Advanced Materials Science Lab I	SE 3 Lab4	Advanced Materials Science Lab II	SE 3 Lab4		
Technical-Scientific Elective Courses (freely distributable over semesters)									FP/SLb (all modules need to be graded) 10 CP		
Studium Generale (General Education) (freely distributable over semesters)									FP/SLb/SL (modules may be graded or ungraded) 6 CP		
Mentoring			0								
Orientation Week	0										

Mathematics and Natural Science Basics (Compulsory)	45 CP	Compulsory Complementary Technology Courses	6 CP	Bachelor Thesis	15 CP
				Compulsory Courses Materials Science	68 CP
Elective Courses Materials Science (12 CP)	0 - 6 CP		0 - 6 CP		0 - 6 CP
Elective Courses Natural Sciences/Technology	10 CP	General Studies	6 CP	Compulsory Lab Courses	18 CP
Recommended Supplementary Offers	0 CP			<b>Sum</b>	<b>180 CP</b>

**Legend:**

CP = Credit Points (ECTS system)
CHW = Contact Hours (45min) per Week
TE = Technical Examination = graded exam (max. 3 attempts, except thesis: max. 2 attempts; additionally one oral supplementary examination (mEP) throughout the Bachelor's course)
SE = ungraded Study Examination
SEg = graded Study Examination
L = Lecture, E = Exercises, P = Presentation, Lab = Laboratory Course
* English & German