

# Admission Requirements

- Bachelor of Science (B.Sc.) in mechanical engineering or a comparable degree with a total of 180 credit points<sup>1</sup> with the following minimum requirements:
  - Mathematics (min. 18 credit points)
  - Mechanics (min. 12 credit points)
  - Materials engineering, production engineering, design, and/or metrology and feedback control (totaling min. 20 credit points)
- Certificate attesting a sufficient knowledge of English according to TOEFL, IELTS, or equivalent
- Certified proof of one's ranking among the top 10% students of the graduating class
- Letter of recommendation (academic or industrial)
- Graduate Records Examination (GRE) recommended

<sup>1</sup> Based on the European Credit Transfer System (ECTS)

www.mmt.mb.tu-dortmund.de





## What does the MMT stand for?

- Master of Science in Manufacturing Technology (M.Sc.)
- Designed especially for international students
- Research-based education
- Cooperation with leading industrial companies
- Long-standing tradition in manufacturing engineering
- World-leading research facilities
- Well-experienced faculty in research and teaching

### Why to choose the MMT?

- All-English curriculum
- Clearly structured study program
- Individual study and career counseling
- Application-oriented research work
- Basic and in-depth theoretical courses
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- Supportive and stimulating environment
- Financial support of selected students through scholarships
- Wide variety of lectures (also at other universities)



## Our Motivation

Providing excellent university training for outstanding, motivated, and committed students within a research-based framework involving close industrial co-operation.

#### Aims

- Providing extensive knowledge and competencies in the fields of manufacturing and production technology
- Enabling students to work in scientific research projects
- Efficient combination of scientific, theoretical courses and experimental, industrial setups
- Qualification of outstanding experts dealing with advanced manufacturing topics

### Learning Outcomes

- Advanced understanding of manufacturing problems
- Analytical reasoning capability
- Ability to approach and solve advanced problems systematically
- Ability to organize and prepare work packages within a research project
- Key competences (communication skills, teamwork)
- Intercultural competence
- Ability to communicate scientific results and insights
- Experience in industrial R&D

# **MMT PROGRAM STRUCTURE (TOTAL 120 CP)**

	1st semester	2nd semester	3rd semester	4th semester
Compulsory module 1	Machining technology 10 CP			
Compulsory module 2	Materials technology 10 CP			
Compulsory module 3	Forming technology 10 CP			
Elective module 1	Elective 1 - Part 1 5 CP	Elective 1 - Part 2 5 CP		
Elective module 2	Elective 2 - Part 1 5 CP	Elective 2 - Part 2 5 CP		
Elective module 3	Elective 3 - Part 1 5 CP	Elective 3 - Part 2 5 CP		
Laboratory work			Laboratory work 10 CP	
Project work			Project work 10 CP	
Interdisciplinary qualification			Interdiscipl. qualification 10 CP	
Master's thesis				Master's thesis 30 CP
Credit points	30	30	30	30

#### Compulsory Modules

- ⇒ Machining Technology (10 CP)
- ⇒ Forming Technology (10 CP)

#### Elective Modules<sup>1</sup>

- ⇒ Automation and Robotics (10 CP)
  - ⇒ Simulation Methods in Solid Mechanics (10 CP)
  - ⇒ Measurement Engineering (5 CP)
  - ⇒ Advanced Simulation Techniques in Metal Forming (5 CP)
  - ⇒ Fatigue Behavior (5 CP)

<sup>1</sup> Can differ from year to year

- ⇒ High Dynamic Testing of Materials (5 CP)
- ⇒ Basics of Materials and Technology (5 CP)
- ⇒ Topics in Manufacturing Technology (5 CP/10 CP)
- ⇒ Additive Manufacturing
- ⇒ Machining Process Simulation (5 CP) ⇒ Various courses offered from other



# What students say

"For students thinking about studying the MMT course, it offers the opportunity to discover the "secret" to the success of German engineers, the high technological knowledge that could be the acquired and extensive opportunity to succeed in your career."

MMT student from Nigeria

"In the MMT course, we are getting world-class education along with the touch of latest technology in manufacturing."

MMT student from India

"this well-organized program offers an exemplary blend of theory and practice in a country that is the heart of Europe not only for quality manufacturing, but also for cultural diversity."

MMT student from Pakistan

"I found the MMT course to be a perfect fit to develop my research skills and experience the co-operation between university and industry."

MMT student from Brazil