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# Master's degree

Fachhochschule  
Dortmund  
University of Applied Sciences and Arts

## Master's in Digital Transformation (MDT)

Dortmund University of Applied Sciences and Arts • Dortmund



## Overview

Degree	Master of Science (MSc)
In cooperation with	<ul style="list-style-type: none"><li>• University of the Basque Country, Bilbao, Spain</li><li>• Norwegian University of Science and Technology (NTNU), Trondheim, Norway</li><li>• KU Leuven, Leuven, Belgium</li><li>• Kiev National University of Construction and Architecture (KNUCA), Kiev, Ukraine</li><li>• West Ukrainian National University (WUNU), Ternopil, Ukraine</li><li>• IMC Fachhochschule Krems, Austria</li><li>• KTU Kaunas, Kaunas, Lithuania</li><li>• University of Latvia (LU), Riga, Latvia</li></ul>
Teaching language	<ul style="list-style-type: none"><li>• English</li></ul>
Languages	<p>Courses are held in English (100%).</p> <p>Students can use German for written assignments and write their theses in German, too.</p>
Full-time / part-time	<ul style="list-style-type: none"><li>• full-time</li></ul>
Programme duration	4 semesters
Beginning	Winter semester
Application deadline	<p><b>Application deadline:</b></p> <p>15 June for the following winter semester</p> <p><b>Pre-application process:</b></p> <p>In order to verify whether you meet the requirements for admission to the programme before submitting your application, all applicants (EU, German, non-EU) are highly recommended to submit their relevant documents (Bachelor's degree, Bachelor's transcript, language certificate) for a pre-check. We start with the pre-check in April.</p> <p>After successfully passing the pre-check, you will receive instructions and a link to the online portal.</p> <p>Here you can find the link to the Pre-Check Service:<a href="https://precheck.go-study-europe.de/">https://precheck.go-study-europe.de/</a>.</p>

Please check: <https://www.fh-dortmund.de/en/studies/application-enrollment.php>.

#### Application process:

We only accept online applications. You will be guided to the application portal after doing the pre-check (described above).

Tuition fees per semester in EUR

None

Combined Master's degree / PhD programme

No

Joint degree / double degree programme

Yes

#### Description/content

**Transform the World into the Digital Future**– Join the English-taught Master's in Digital Transformation (MDT) at the Dortmund University of Applied Sciences and Arts (Fachhochschule Dortmund). Study in a very friendly international environment, with projects turning cutting-edge knowledge into practical experience in the dynamically growing high-tech industries of the German Ruhr Valley region.

The Master's in Digital Transformation (MDT) delivers the competencies to shape the digital revolution. With the MDT Master's programme, we focus on the complete design flow and technology stack for digital solutions – especially software & cloud technologies. We are exploring the relevant business models and socio-economic impact as well. Our graduates are trained to work in very dynamic, diverse, and agile international teams aiming for solutions that benefit both society and industry.

The three pillars of the MDT competence model are as follows:

1. The curriculum in software engineering with the relevant processes, methods, and tools to develop complex software solutions
2. Design and deploy cross-domain digital systems
3. A strong focus on user-centred development processes that involve users as co-producers.

Our students have key advantages by studying MDT at FH Dortmund:

- Wide research and job opportunities are available for our students and many career opportunities are open to our graduates in German and international companies, e.g. in the Ruhr Valley industrial region. Our graduates work at Bosch, Siemens, Volkswagen AG, Daimler, to name a few.
- Culturally diverse international teams and class experience
- Interactive learning methods
- International events and conferences, as well as a semester abroad exchange programmes
- Research opportunities in our Research Institute for the Digital Transformation (IDiAL)
- Scholarship opportunities and dormitory access
- Hands-on experience with practical approaches
- International Networking
- We are more than a university, we are family – we support students and staff in achieving an equitable balance between study, professional, and family life.

For more information on the Master's in Digital Transformation (MDT) programme, please visit:

- [MDT on European Partnership for Project and Innovation Management \(EuroPIM\) website](#)
- [MDT on FH Dortmund website](#)
- or contact us directly (see the contact information above)

## Course Details

## Course organisation

The international Master's in Digital Transformation (MDT) programme is taught in four semesters, including the Master's thesis. The programme has a workload of 3,600 hours and 120 credit points (ECTS).

The first two semesters consist of five modules each. In the second and third semesters, students may study their chosen specialisation. The programme finishes with a Master's thesis.

Master's thesis topics comprise university research projects or industrial development/research. All classes and labs as well as course documentation and exams are in English. (Students can use German for written assignments and write their theses in German, too).

### Compulsory modules (each module 6 ECTS):

#### First semester

- Innovation Driven Software Engineering
- Software Architecture
- Digital Systems 1
- R&D Project Management
- Scientific & Transversal Skills 1

#### Second semester

- Usability Engineering
- Software-Intensive Solutions
- Digital Systems 2
- Scientific & Transversal Skills 2
- Elective 1

#### Third semester – specialisation and research project

- Elective 2
- Elective 3
- Research Project (thesis)

#### Fourth semester

- Master's Thesis (30 ECTS)

### Elective Modules (each module 6 ECTS):

- Software Engineering Project
- Smart Home, Smart Building & Smart City
- Human-Centred Digitalisation
- Requirements Engineering
- IoT & Edge Computing
- Trends in Digital Transformation
- Information Processing and Data Analytics
- Formal Methods
- Managing Digital Change
- Digital Business Ecosystems
- Trends of Artificial Intelligence in Business Informatics
- Research Seminar

The didactic model of the programme involves lectures (partly online), practical elements, and scientific elements. The practical elements include work with industry and society. The teaching elements are mainly designed as block lectures. Therefore, the programme can be studied part-time in a very flexible way while working in a company. Students have the possibility to receive academic recognition of job-related achievements. The third semester can also be used as an exchange semester with one of the partner universities. The electives allow for a specialisation on a topic such as an application domain. Furthermore, courses from a Master's programme on project management or a programme on embedded systems can be selected. The research project and the Master's thesis can be conducted in cooperation with a company or within a research project at the university.

Further information and detailed descriptions of each module can be found here:  
[Master's in Digital Transformation - Module Handbook](#)

<b>A Diploma supplement will be issued</b>	Yes
<b>International elements</b>	<ul style="list-style-type: none"> <li>• International guest lecturers</li> <li>• Integrated study abroad unit(s)</li> <li>• Language training provided</li> <li>• Courses are led with foreign partners</li> <li>• Training in intercultural skills</li> <li>• Study trips</li> <li>• Projects with partners in Germany and abroad</li> </ul>
<b>Integrated study abroad unit(s)</b>	<p>The third semester will focus on a project in one selected area leading to a specialisation.</p> <p>Typically, participants spend this semester at a university within the EuroPIM consortium. Projects can also be organised as joint projects within the consortium.</p>
<b>Integrated internships</b>	<p>None</p> <p>(The project and Master's thesis can be done in combination with an internship.)</p>
<b>Special promotion / funding of the programme</b>	<ul style="list-style-type: none"> <li>• DAAD</li> <li>• ERASMUS+</li> </ul>
<b>Name of DAAD funding programme</b>	DAAD Strategic Partnerships
<b>Course-specific, integrated German language courses</b>	Yes
<b>Course-specific, integrated English language courses</b>	No

## Costs / Funding

<b>Tuition fees per semester in EUR</b>	None
<b>Semester contribution</b>	Enrolment fees are approx. 330 EUR per semester. The fee includes a semester ticket covering public transport in the state of North Rhine-Westphalia (NRW).
<b>Costs of living</b>	Approx. 850 EUR per month to cover personal expenses
<b>Funding opportunities within the university</b>	No

# Requirements / Registration

## Academic admission requirements

Academic admission requirements include the completion of a “Diplom” or Bachelor's course of study of Computer Science, Business Informatics, Information Technology, Software Engineering or equivalent at a university of applied sciences ("Fachhochschule") or a university, or the completion of a corresponding accredited Bachelor's qualification programme at a university of cooperative education ("Berufsakademie") with an overall grade of at least “good” (2.5). In addition, competences in the field of study of Digital Systems and Software Engineering on a sufficient level need to be demonstrated. It must be evident that previous studies included a thesis.

## Language requirements

Applicants must provide proof of their English skills:

- TOEFL iBT 90 points (Internet-based)
- TOEFL ITP 550 points
- IELTS 6.5
- or equivalent

Certificates should not be older than two years.

## Application deadline

### Application deadline:

15 June for the following winter semester

### Pre-application process:

In order to verify whether you meet the requirements for admission to the programme before submitting your application, all applicants (EU, German, non-EU) are highly recommended to submit their relevant documents (Bachelor's degree, Bachelor's transcript, language certificate) for a pre-check. We start with the pre-check in April.

After successfully passing the pre-check, you will receive instructions and a link to the online portal.

Here you can find the link to the Pre-Check Service: <https://precheck.go-study-europe.de/>.

Please check: <https://www.fh-dortmund.de/en/studies/application-enrollment.php>.

### Application process:

We only accept online applications. You will be guided to the application portal after doing the pre-check (described above).

## Submit application to

Only online application is allowed. Please send all requests to: [service-mdt@fh-dortmund.de](mailto:service-mdt@fh-dortmund.de).

Find more information on our website: <https://www.fh-dortmund.de/mdt>

# Services

## Possibility of finding part-time employment

Not offered by the university

Students have good chances to find a paid internship or student job, especially in the third and fourth semesters.

## Accommodation

All suggestions regarding accommodations are available at <https://www.fh-dortmund.de/en/studies/housing.php> and <https://www.fh-dortmund.de/en/studies/living-and-housing.php>.

Students can also find accommodations on the private market. Rent for a single room in a student hall of residence is approx. 300 EUR. Dortmund University of Applied Sciences and Arts does not have an internal accommodation office. It is the responsibility of each student to find her/his own accommodation.

## Support for international students and doctoral candidates

- Specialist counselling
- Visa matters
- Buddy programme
- Welcome event

## Our Partners



## Master's in Digital Transformation (MDT) at FH Dortmund

Transform the world into the digital future – join the English-taught Master's in Digital Transformation (MDT) programme at the Dortmund University of Applied Sciences and Arts (Fachhochschule Dortmund).

Are you interested?  
Please visit our website of the EuroMPM programme:  
<https://www.fh-dortmund.de/mdt>.

» more:  
<https://www.youtube.com/watch?v=HcsDddiCnj4&t=23s>

— Dortmund University of Applied Sciences and Arts —



Building of the Faculty of Computer Science

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**Dortmund University of Applied Sciences and Arts (Fachhochschule Dortmund)** is future-oriented with a more than 100-year-old history. The world is changing – and our modern university is changing, too.

- Study and teaching here are geared towards practical problem-solving.
- Our highly experienced professors are cementing the link between theory and practice.
- Internationality and diversity: Engaged worldwide, we motivate our students to take at least one semester abroad at our partner universities in the EU.
- We are a family-friendly university keeping the best balance between studying and personal life.
- The university offers over 80 study options, in eight faculties:

1. Computer Sciences
2. Information Technology
3. Mechanical engineering
4. Electrical engineering
5. Applied Social Sciences
6. Economics
7. Architecture
8. Design

We have years of experience in international education successfully offering three International Master's Degree study programmes:

- [Master's Embedded Systems Engineering \(ESE\)](#) offered by the Faculty of Computer Sciences
- [Master's Digital Transformation \(MDT\)](#) offered by the Faculty of Computer Sciences
- [European Master's in Project Management \(EuroMPM\)](#) offered by the Faculty of Business Studies

Furthermore, we are offering the [Ruhr Master's School](#).

We motivate our students to go abroad for at least one semester to extend their professional network and experience, improve language skills and develop intercultural competences.

## University location

Go study in Dortmund

Dortmund University of Applied Sciences and Arts welcomes foreign students who want to come and study at the Faculty of Computer Science as degree-seeking students or exchange students who study here for one or two semesters.

The Faculty of Computer Science receives international students from all over the world. They usually come from partner institutions and



follow a course of study agreed with their home institutions or participate in our international Master's courses of study as degree-seeking students.

Foreign students have access to all campus facilities and are assisted by the International Office in all matters of enrolment, housing, and visas. The following website contains general information for all incoming international students, from application forms to health insurance matters:

<https://www.fh-dortmund.de/en/international/io.php>

To find out what the city of Dortmund has to offer, see the following website for information and impressions of this dynamic city in the Ruhr area.

<http://www.dortmund.de/en/index.html>

## Contact

### Dortmund University of Applied Sciences and Arts

Computer Science

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44227 Dortmund

✉ [masterdigi@fh-dortmund.de](mailto:masterdigi@fh-dortmund.de)

🌐 Course website: <https://go-study-europe.de/master-digital-transformation/>

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📘 <https://www.facebook.com/gostudyeurope/>

📷 <https://www.instagram.com/gostudyeurope/>

📺 [https://www.youtube.com/channel/UCuxp6dy5F456SvLEQ\\_7w47Q/featured](https://www.youtube.com/channel/UCuxp6dy5F456SvLEQ_7w47Q/featured)

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# International Programmes in Germany - Database

[www.daad.de/international-programmes](http://www.daad.de/international-programmes)  
[www.daad.de/sommerkurse](http://www.daad.de/sommerkurse)

## Editor

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German Academic Exchange Service  
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## GATE-Germany

Consortium for International Higher Education Marketing  
[www.gate-germany.de](http://www.gate-germany.de)

## Disclaimer

The data used for this database was collected and analysed in good faith and with due diligence. The DAAD and the Content5 AG accept no liability for the correctness of the data contained in the "International Programmes in Germany" and "Language and Short Courses in Germany".

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Federal Ministry  
of Education  
and Research