Embedded Systems Engineering

Fachhochschule Dortmund (University of Applied Sciences and Arts)
Master of Engineering

General

Be prepared to work professional and independant

The master study course Embedded Systems Engineering leads to a degree which qualifies individuals both in the field of scientific research as well as in areas of professional practice. They are being prepared for technical careers but also for senior management assignments in technical projects. Furthermore, a subsequent career in academic research is also an option.

Overview

Faculty: Faculty of Computer Science
Course of study: Embedded Systems Engineering
Academic degree: Master of Engineering (M.Eng.)
Standard program duration: 4 semesters
Social contribution: 299,40 €
Language of instruction: English
Admission: unrestricted with pre-check and an overall grade of at least 2,5
Start of studies: Winter
Application EU citizen: Mid May to 15 July
Application non-EU citizen: 1 April to 15 June

Fachhochschule Dortmund

University of Applied Sciences and Arts

Contact

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Content

Embedded Systems Engineering deals with problems like...

• how to model control systems for mechatronic systems
• how to implement algorithms for distributed embedded systems
• how to evaluate and use tools for embedded software engineering
• how to lead cross-domain designs of mechatronic systems

The master program will be completed in 4 semesters within the standard course duration. A teaching program with compulsory courses in the first and second semester provides basic competences and enables the students to develop their distinctive profile within the scope of their main focus areas. This is combined with a 2-semester research phase with electives and thesis projects. Through the subject range offered by the Ruhr Master School (RMS), the compulsory elective studies are integrated in a cross-university network. This offer is completed by international, project-oriented components and summer schools as well as symposia. The workload for the course of studies amounts to a total of 3,600 hours (900 hours per semester), including time for the Master's thesis. To successfully complete the course of studies, a total of 120 credit points according to the European Credit Transfer and Accumulation System (ECTS) must be obtained.

Embedded Systems Engineering is unique since...

this program provides skills to work in cross-domain projects within international teams. A major focus is put on the understanding of the complete systems engineering design flow.

Master of Engineering prepares you for a professional and independent work

If the master's Examination has been passed, Dortmund University of Applied Sciences and Arts, Fachhochschule Dortmund, awards the degree Master of Engineering (M.Eng.).
It confirms that the students have acquired the advanced professional expertise as well as the methodological and key skills required in order to work independently in their profession, and that they are capable to work independently in an entrepreneurial context on the basis of scientific findings and methods.

Perspectives

Professional perspectives

Graduates of this Master's program find their job opportunities in:

- the automotive industry
- industrial automation
- medical technology
- research institutes

Cooperative Promotion

The Master's degree is the basis for a doctorate. Graduates who wish to acquire further academic qualifications have the opportunity to pursue a doctoral degree at a university through a cooperative doctorate in which Fachhochschule Dortmund – University of Applied Sciences and Arts cooperates with a university.

Application

What do i need?

1. Required degree

Diplom or a Bachelor's degree in the field of Computer Science, Electrical Engineering, Information Technology or a completed study program closely related to the Master's program Embedded Systems Engineering at a university of applied sciences (Fachhochschule) or a university, or the completion of a corresponding accredited Bachelor's qualification program at a university of cooperative education (Berufsakademie) with an overall grade of at least "good" (2.5).

The qualifying study program must have included instruction in the relevant competences in the areas of Software Engineering, Control Engineering, Signal Processing and Systems Engineering equalling the required amount at the required level.

In addition, the programs must amount to a minimum of 180 credit points in accordance with the European Credit Transfer and Accumulation System (ECTS). Degrees obtained outside the ECTS-System must be converted into the ECTS-System.

2. Proof of English language proficiency

Proof of the required English language proficiency acquired in the TOEFL ITP test with at least 550 points or in the TOEFL iBT test with at least 90 points, taken within the last two years before the application. The proof of language proficiency can also be provided by other test types equivalent to the TOEFL test in accordance with the Common European Framework of Reference for Languages: Learning, Teaching, Assessment - CEFR, (e.g. IELTS with a score of at least 6.5). In exceptional cases, the proof can be provided by an equivalent certificate or other certificates that confirm the corresponding minimum requirements (equivalent to C1 of the Common European Framework of Reference for Languages). An appointed committee decides whether the equivalence is met.

3. Pre-Check Service

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 documents for a pre-check.

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 >

Mechatronik

Informatik