

# Your Master plan: Mechatronic & Cyber-Physical Systems in Deggendorf

# YOUR TICKET TO ONE OF THE FASTEST DEVELOPING TECHNICAL SECTORS!

The global Cyber-Physical Systems market was estimated at **USD 118.20 billion in 2024 with 13.7% annual growth rate** until 2030.

Source: Grand View Research - Cyber-physical Systems Market (2025 - 2030)

Industrial applications

Farming assistant

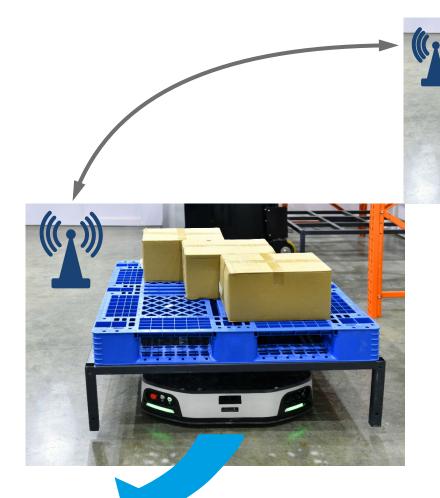


Consumer products

Medical technology

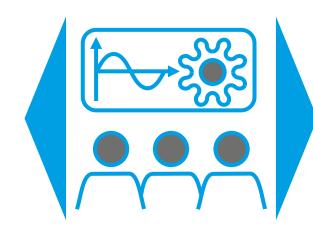
### WHAT'S A CYBER-PHYSICAL SYSTEM?

- **Cyber:**Networks, WLAN modelling
- Physical: Interacting with the physical world, Sensors & Actuators
- **System:**Control engineering, systems engineering



#### **KEY TOPICS**

- **Cyber:**Networks, WLAN modelling
- Physical:
  Interacting with the physical world,
  Sensors & Actuators
- **System:**Control engineering, systems engineering



#### PROGRAMME CONTENTS

- Cyber-physical systems
- VR/AR
- Innovative HMI
- Robotics
- Autonomous systems
- Additive manufacturing
- Modelling & simulation
- Functional safety

#### + 4 CASE STUDIES:

Practical implementation with in total approx. 650h workload

#### VOICES OF DIT - HANDS ON LEARNING IS IMPORTANT!



Theory is important, but practical application is what can change the world. That's why my favorite part of the Master's programme are the Case Studies! The projects are challenging, but they have truly helped me grow — both as a person and as an engineer.

Saikumar Konakanchi, 2025



Autonomous Systems is an extremely dynamic field. I have learned a lot during this course, and the combination of theoretical research and practical implementation is a unique experience!

Nitin Medisetti, 2025

#### HIGHLIGHTS

- CHE University Ranking 2021/2022: The Faculty of Mechanical Engineering and Mechatronics is in the top group in the area of "Practical Relevance".
- The study programme places a great emphasis on **practical application.** Using numerous case studies, students learn to translate theoretical concepts into real-world solutions (650 hours in total).
- **Teaching Labs:** IT, Sensorics, Electrical Engineering, Embedded/IoT, Intelligent Robotics



#### **COURSE OF STUDY**

- Duration: 3 semesters
- **Start:** winter semester (01. October) at Campus Deggendorf summer semester (15. March) at Campus Cham
- Application period:
  - 15 Apr. 15 June (for winter semester) for Campus Deggendorf O1 Oct. O1 Dec. (for summer semester) for Campus Cham
- Teaching language: English
- Applied & interactive teaching style
- Personal support, small groups and close ties with professors

## **ENTRY REQUIREMENTS**

- Bachelor degree (at least 210 ECTS credits)
  - in the fields of industrial engineering, technical physics, mechanical engineering, electrical eng., mechatronics or a related degree programme.
- Admission test (online or on-site)
   based on subject areas relevant for the study programme:
  - Mathematics, Physics,
  - Electrical engineering,

- Control engineering,
- System theory,

- Simulation,
- Computer science

- Language requirements:
  - B2 English certificate (prior to DIT studies)
  - A2 German (by the end of your DIT studies)

#### WHAT'S NEXT?

The programme prepares you to take on **key roles** in a **wide variety of positions** in **different areas** depending on your personal interests and background.

#### JOB PROFILE

- Autonomous Systems Engineer
- Robotics Engineer
- System Integration Engineer
- Embedded System Engineer
- ...

#### AREAS AND INDUSTRIES

- Hardware & software design
- Research & development
- Autonomous systems design
- Robotics
- Manufacturing
- Mobility & Automotive
- ...

#### IS THIS PROGRAMME SUITABLE FOR YOU?

Yes, if...



...you enjoy solving technical challenges that combine software, hardware, control, sensing, and innovation with interdisciplinary teams.

fastest developing industry areas!



...you have a basic understanding of **robotics** and a good knowledge of control and mechanical engineering.

...you have a Bachelor's degree in Industrial, Mechanical or Electrical **Engineering, Technical Physics, Mechatronics** or related fields.



... you want to discover and **develop** pioneering solutions.

#### WOULD YOU LIKE TO FIND OUT MORE?



Would you like more detailed information about the programme, or do you have any questions?

You are very welcome to contact

**Prof. Dr.-Ing. Stefan Scherbarth.** 

Simply make an appointment at stefan.scherbarth@th-deg.de