MAXIMA WIEGELS
CURRICULUM VITAE

PROFILE

Master's student in Medical Engineering specializing in medical device development, with hands-on experience in .

LANGUAGE SKILLS

German: native speaker **C2**

English: fluent **C1**

French: basic knowledge **B1**

IT SKILLS

Python: advanced

C++: intermediate

LabVIEW: intermediate

CAD (Inventor): intermediate

MS Office / LaTeX / Origin: advanced

INTERESTS

ballett and Jazz dance

Creative projects (electronics, 3D printing, woodworking)

VOLUNTEER EXPERIENCE

Coach and organizer of an inclusive hockey team for athletes with disabilities.

C-level coaching license, responsibility for training and team development.

EDUCATION

Technical University of Darmstadt
M.Sc. Medical Engineering.

04.2025 – present (parallel enrollment)

Focus on medical device development, biomedical signal processing, and healthcare technology.

Technical University of Darmstadt
B.Sc. Medical Engineering.

final grade: 1.8.

10.2021 – 04.2025

Bachelor's thesis: Design and implementation of a low-cost data acquisition system for biomedical signals.

Hands-on experience in hardware design, signal processing, and system integration.

RELEVANT PROJECTS & EXPERIENCE

ION THRUSTER RESEARCH GROUP – JLU GIESSEN

Student Researcher
Conducted plasma measurements and diagnostics in the context of electric propulsion research.

04.2023 – 10.2023

Supported experimental investigations using THz time-domain spectroscopy (THz-TDS).

Gained experience in laboratory workflows, data evaluation, and experimental validation.

Project Work
Developed a global Python-based model for multi-species plasmas.

10.2024 – 04.2026

Used the model to study plasma behavior relevant to electric propulsion systems.

Strengthened skills in numerical modeling, validation, and scientific programming.

Project Work
Developed a Python-based simulation of atmospheric reentry for different space vehicles.

10.2025 – 04.2026

Modeled key physical effects including aerodynamic forces, thermal loads, and flight dynamics.

Strengthened skills in multi-physics modeling, numerical methods, and scientific programming.

GSI HELMHOLTZ CENTRE FOR HEAVY ION RESEARCH

Internship
Work on the SHIPTRAP experiment, including the design of a cooling system for analogue components.

07.2025 – 10.2025