Artificial Intelligence and Robotics (M.Sc.)

Master‘s Program
Department of Computer Science

unfold your career

Hochschule Hof
University of Applied Sciences

Artifical Intelligence and Robotics – What is it all about?

Experts who are familiar with artificial intelligence, machine learning and robotics are among the most sought-after professionals of our time. With this brand-new Master‘s degree, you will gain the expertise you need and create splendid career prospects.

With our modules in the areas of artificial intelligence, especially machine learning and deep learning, you will gain the necessary knowledge to implement effective AI-based solutions in a wide variety of application areas.

We place a special focus on the application area of robotics. You will learn how to design intelligent robotics solutions and deepen your skills through practical exercises in various modules.

What do I gain with this M.Sc.?

With this Master's program, you will

_ develop an in-depth understanding in the fields of AI and intelligent robotics,

_ learn about state of the art algorithms,

_ gain knowledge of complex methods and models, such as Deep Generative Models, Variational Autoencoders, Deep Reinforcement Learning, Simultaneous Localization and Mapping, or Robot Imitation Learning.

In addition, you will

_ develop your intercultural competence,

_ be able to independently plan, execute, and evaluate complex projects in the fields of AI and robotics

_ know a wide range of solution strategies that you can transfer to unknown tasks and new application areas.

Further information is available on www.hof-university.de

Fast facts

Degree awarded
Master of Science (M.Sc.)

Duration
3 semesters (including Master‘s thesis)

Language of instruction
Fully taught in English

Tuition fees
No tuition fees; just an administrative fee of approx. € 150 per semester

Services and support for international students

_ organisational support before and during your studies at Hof University

_ assistance in finding accommodation

_ Orientation Week prior to the start of your studies

_ social integration

_ career-promoting activities such as intercultural trainings, field trips, and company visits

_ free public transportation in the city of Hof

What do I need to bring?

Academic requirements

_ **Bachelor‘s degree in computer science or in an engineering or natural sciences program** that has provided a **basic knowledge of information technology** sufficient for study in the Artificial Intelligence and Robotics Master‘s program,

_ Bachelor‘s degree with at least 210 ECTS or equivalent (depending on home country) from an accredited university; **minimum grade 2,5** according to the German grading system

_ Applicants with less than 210 credits (ECTS) can be accepted but have to gain the missing credits by either

  _ doing an internship (at least 23 weeks) as long as no internship was done during the Bachelor’s degree.

  _ Attending appropriate modules at Hof University (for applicants who already did an internship).

  _ For both alternatives, please calculate an additional (fourth) semester.

Language requirements

You need to prove your **proficiency in English**. This can be done with either of the following:

_ TOEFL minimum 90

_ IELTS 6.5 or above

In addition: **Basic language skills in German**, proven by official test score documents - **minimum level A1**

Timeline

Online application
You register in our online portal Primuss and fill in the application form with your personal details. If you acquired your university entrance certificate abroad, **uni-assist** must assess the certificate before you can send it to Hof University. We advise you to send your documents to uni-assist **at least 4 weeks before our application deadline**.

Application period — November 5 - November 30

Get your admission letter to Hof University — December

Online enrolment — March

Orientation Week for international students — first two weeks of March

Start of your studies at Hof University — March 15

Course structure

Semesters 1 & 2	**Core modules** _ Applied Deep Learning _ Intelligent Robotics _ New Technologies in Computer Science _ New Technologies in AI and Robotics _ Predictive Maintenance and Condition Monitoring _ Advanced Architectures in AI _ Generative AI _ AI Project _ Industry 4.0 / Data Management **Electives (select one)** _ Security of Information Systems _ Data Engineering and Analysis Methods _ Mixed Media (AR, VR, MR) _ IoT Architectures _ Security Research Seminar _ Information Structuring and Visualization **Intercultural competence** _ For international students: German as a foreign language (next higher level) _ For German students: Intercultural Competence or Unicert courses
Sem. 3	**Master‘s thesis with a company**

What are my career perspectives?

As a graduate, you...

_ have excellent career prospects in various fields, e.g. computer vision, autonomous machines or intelligent automation,

_ you are qualified for many different jobs, especially in the area of research and development,

_ most likely find an interesting and well-paid position immediately after graduation to due a high demand for AI experts.

... Entry positions?

You are ready to work as

_ Robotics application developer

_ AI developer

_ IT project manager

_ Consultant

_ ML architect

_ Data engineer

_ Machine learning engineer

„I have enjoyed every aspect of my studies and can hardly imagine that the opportunities available could be topped anywhere else.“

Vincent from Germany, graduate

„The Artificial Intelligence and Robotics program is the perfect opportunity to learn everything about AI. Not only do you get a mathematical look behind the technology, but you also learn how to apply it in project work and your own implementations. All questions related to the field are answered in class, and it is not uncommon for social issues to be addressed.

As a location, Hof University has the great advantage of being very active in science and research. Not only do you have access to the concentrated, up-to-date knowledge of the professors and lecturers, but you can also easily use the technical solutions of the university for all your needs. As a result, you are excellently trained in the field and have the best possible opportunities for a career in industry or research.“

„The university’s staff are very nice and extremely helpful.“

Alaa from Syria, student

„I appreciate the program‘s comprehensive and up-to-date curriculum especially because it combines both theoretical knowledge and hands-on lab work. Moreover, the professors are extremely knowledgeable about the field, and they are always keeping up with the latest advancements which can be seen in their lectures.

The university also provides language courses at multiple levels for quicker integration into society. As for the city of Hof, it’s a very relaxed and welcoming city with everything a student would need.“

Why choose Hof University?

At Hof University, you can expect

_ a first-class, hands-on education,

_ a safe, friendly and open-minded study environment, especially for international students,

_ extensive personal support by our Welcome Center, International Office and Career Service.

In addition, you benefit from

_ assistance in finding accommodation,

_ orientation sessions prior to the start of your studies,

_ additional activities such as intercultural trainings, field trips and company visits,

_ 24-hours access to computer labs and library,

_ free wifi on campus.

Who can I contact with further questions?

Head of M.Sc. Program

Prof. Dr. Michael Spangenberg
michael.spangenberg@hof-university.de

Welcome Center

Carolin Huttner
Tel +49 9281 409-3319
welcome@hof-university.de

facebook.de/
HochschuleHof

instagram.com/
hof.university.international

youtube.com/c/
HochschuleHof1

Hochschule Hof
Campus Hof

Alfons-Goppel-Platz 1
95028 Hof/Saale
Germany
Phone +49 9281 409-3319
www.hof-university.de