

The Master program Applied Research in Computer Science qualifies you for many different jobs in a scientific career but also in a private enterprise company, depending on the research group that you choose. Possible entry positions include:

- Scientific assistant
- PhD candidate
- IT project manager
- Software architect
- Requirements engineer, business analyst
- Backend application developer
- Data scientist, data engineer
- Specialist for industrial internet of things
- Consultant for digital transformation
- Founder of your own IT company

## The right mix for your career

The study program consists of work in research projects of the research groups at the Institute of Information Systems (iisys), special lectures in research methodology as well as lectures in computer science subjects, organization science and business law. There will be a good mixture of practical work like programming, training of social skills in meetings and by giving presentations as well as conceptual work like creating architecture models, doing criteria-based comparisons or literature reviews to find suitable algorithms and research approaches.



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## Applied Research in Computer Science (M.Sc.)



Master's program  
Department of Computer Science



Digitalization is not mainly about converting analog information to a digital format, but includes open innovation, changing business models and providing services around products. In a world where fast time to market is increasingly important, corporations are well advised to listen to their customers for suggestions for improvement or new products and work closely together with universities and research labs to incorporate the latest technologies that help them fulfilling their customers' needs.

If you want to become part of this game and help bringing results from foundational research to practical use with usage scenarios from the local enterprises in upper Franconia and its surrounding, then this Master study program is right for you. Become part of our multi-disciplinary team of experts and start your scientific career, become an entrepreneur or prepare for a job.


Admission prerequisites

- Bachelor’s degree in computer science, media informatics, mobile computing or business information systems or comparable study programs with at least 210 credits according to the European Credit Transfer System (ECTS)
- Applicants with less than 210 credits (ECTS) have to gain the missing credits:
  - You can do an internship (at least 23 weeks) as long as no internship was done during the Bachelor’s degree.
  - If you already did an internship, we offer suitable modules at Hof University which you can attend.For both alternatives, please calculate a fourth (extra) semester.
- Above-average grades in object-oriented programming, software engineering, computer networks and databases
- Written application that includes your bachelor thesis, a certification about an internship or practical work of at least 18 weeks and a two-page literature review about a scientific topic of one of the iisys research groups
- Oral exam with questions and discussion of a case study presented by you (can be done via video chat)
- Proficiency in English, proven by either
  - official test score documents (TOEFL minimum 90 or IELTS 6.5 or above) or
  - confirmation that the Bachelor’s program was taught completely in English language
- Basic language skills in German, proven by official test score documents - minimum level A1

Application procedure

- The application process consists of a written and an oral part. For the written part, you hand in a certification about an internship of at least 18 weeks as well as a scientific work like your bachelor thesis. You also have to do a two-page literature review. If you pass the written part, you are admitted for the oral part, which can be done in a video chat.
- Application periods
    - for winter semester: April 15 - May 31
    - for summer semester: November 5 - November 30
  - For your application, you register in our online portal Primuss: [www.hof-university.de/application](http://www.hof-university.de/application)
  - Mid of June / start of December (winter/summer): you get your admission for the oral exam.
  - End of June / mid of December (winter/summer): oral exam
  - Start of July / before christmas (winter/summer): you get your admission for the research master.
  - October 1 / March 15: Your studies start.

Please scan the code for full details of the application procedure!



Duration, costs and degree awarded

- 3 semester full time studying starting in winter/ summer
- Costs: no tuition, just an administrative fee to the student union (~100 € per semester)
- Degree: Master of Science (M.Sc.)



All modules of this Master are fully taught in English language. During the three semesters of standard course length, you study the following modules:

3

Master thesis

2

+

1

- Obligatory modules**
- New technologies in computer science
  - Design science approaches in computer science research
  - Behavioral approaches in computer science research
  - Designing and developing business models
  - Project seminar
  - Research project
- Electives (choose two):**
- Security of information systems
  - Data engineering and analysis methods
  - Mixed Media (AR, VR, MR)
  - IoT Architectures
  - Security Research Seminar
  - Information Structuring and Visualization