

Applied Research and Innovation in Computer Science

Dual | full-time programme

Focus areas

Computer Science | Research | Innovation

Master



Studying Applied Research and Innovation in Computer Science

The English-language master degree programme trains experts for a professional activity at the interface between industry and research. Equipped with profound knowledge in applied computer science research, graduates of this programme will help shape the digital transformation. The education with a close practical reference prepares students for a career in research, development and innovation departments of companies, research institutions, universities of applied sciences and other universities.

Study content

Future-oriented research in the field of computer science and innovation requires specialists with comprehensive theoretical and practical knowledge. An ideal supervisory relationship and intensive mentoring make sure that the students' strengths are promoted and that they can make use of their talents. The dual study system of the master programme is unique in Austria. It takes the demands of the working world into account and gives students the opportunity to participate in the design of research projects at national and international research centres (e.g. AIT, Salzburg Research, SBA Research) during their studies.

The curriculum has five focus areas which it treats equally over all four semesters:

- **Scientific Work:** students will work in peer-reviewed international research projects and learn how to communicate their research results effectively.

- **Computer Science:** in addition to the theoretical foundations of computer science, this area conveys knowledge in the field of data science in particular.
- **Science and Society:** allows students to understand how methods to gain scientific knowledge shape the development of society.
- **Innovation Management:** the objective of this focus point is to show how research results can support and produce innovations.
- **Computer Science Research Projects:** close cooperation with the project partners allows students to participate in research projects. At the same time, the close collaboration constitutes an ideal supervisory relationship.

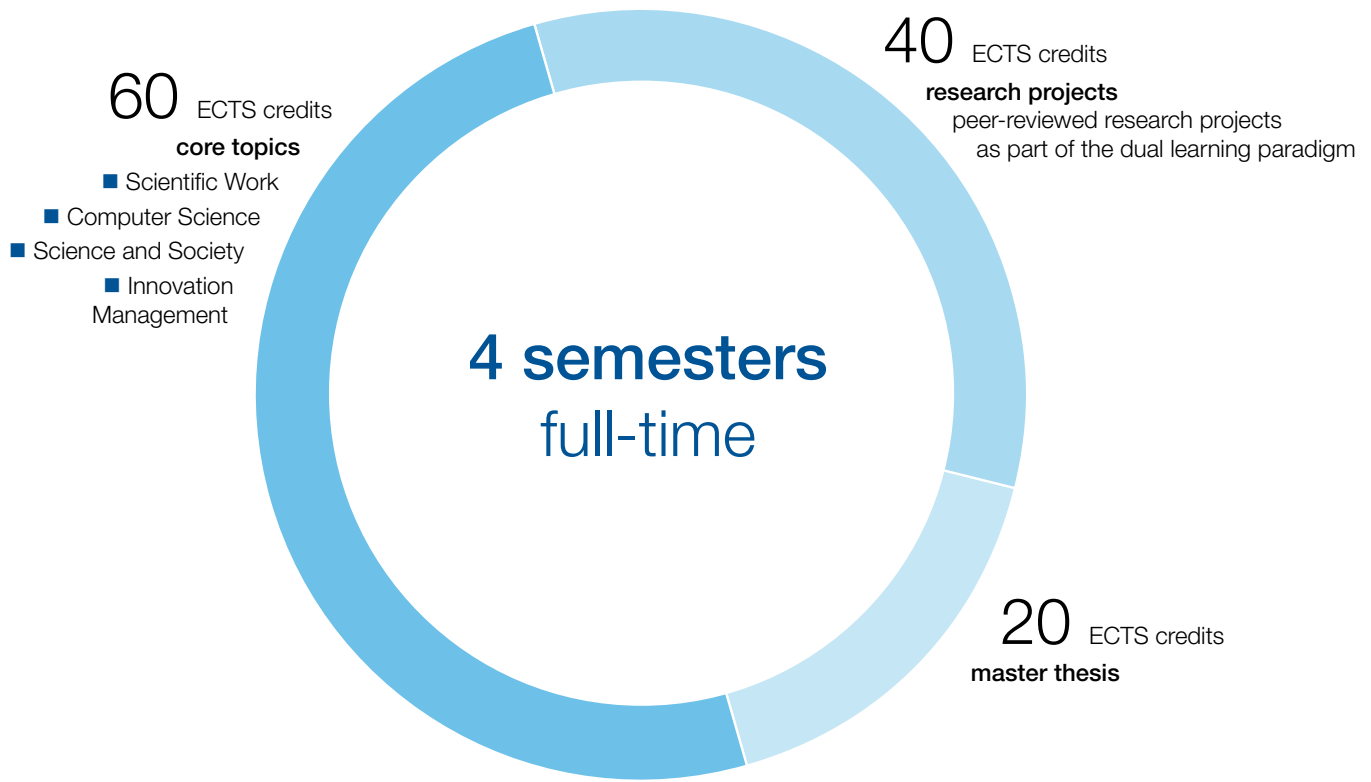
An essential focus covering all these points is the transfer of linguistic competence.

Top career opportunities

Since the entire study programme is in English, graduates have a wide range of job opportunities abroad. The extensive possibilities of specialisation within the research field of computer science make sure that the graduates are in high demand as experts in their respective special areas.

The following areas of activity are particularly well suited:

- As managers in SMEs, the graduates identify research and innovation opportunities in their companies and establish adequate cooperation projects with research institutions.
- Companies with their own research departments rely on the expert knowledge of the graduates when it comes to the conception, implementation and execution of research projects.
- As researchers at universities of applied sciences, other universities, or research centres, the graduates process research projects and establish contacts with the business community, thus creating product, process and service innovations.



Information and Application



Degree

Master of Science in Engineering
(MSc)

Study places / year

12

Head of the development team

Priv.Doz. Mag. Dipl.-Ing. Dr. Edgar Weippl

International

It is possible to spend a semester abroad at an international partner university.



Application

apply.fhstp.ac.at

Admission dates & requirements

fhstp.ac.at/mcs



Information

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About the study programme

Dual learning

The design as a dual-system programme offers students not only a comprehensive theoretical education but also participation in research projects at companies, non-university research centres, universities of applied sciences and universities. An education at the highest scientific level in combination with a strong practical orientation gives students excellent opportunities for development.

Modern infrastructure

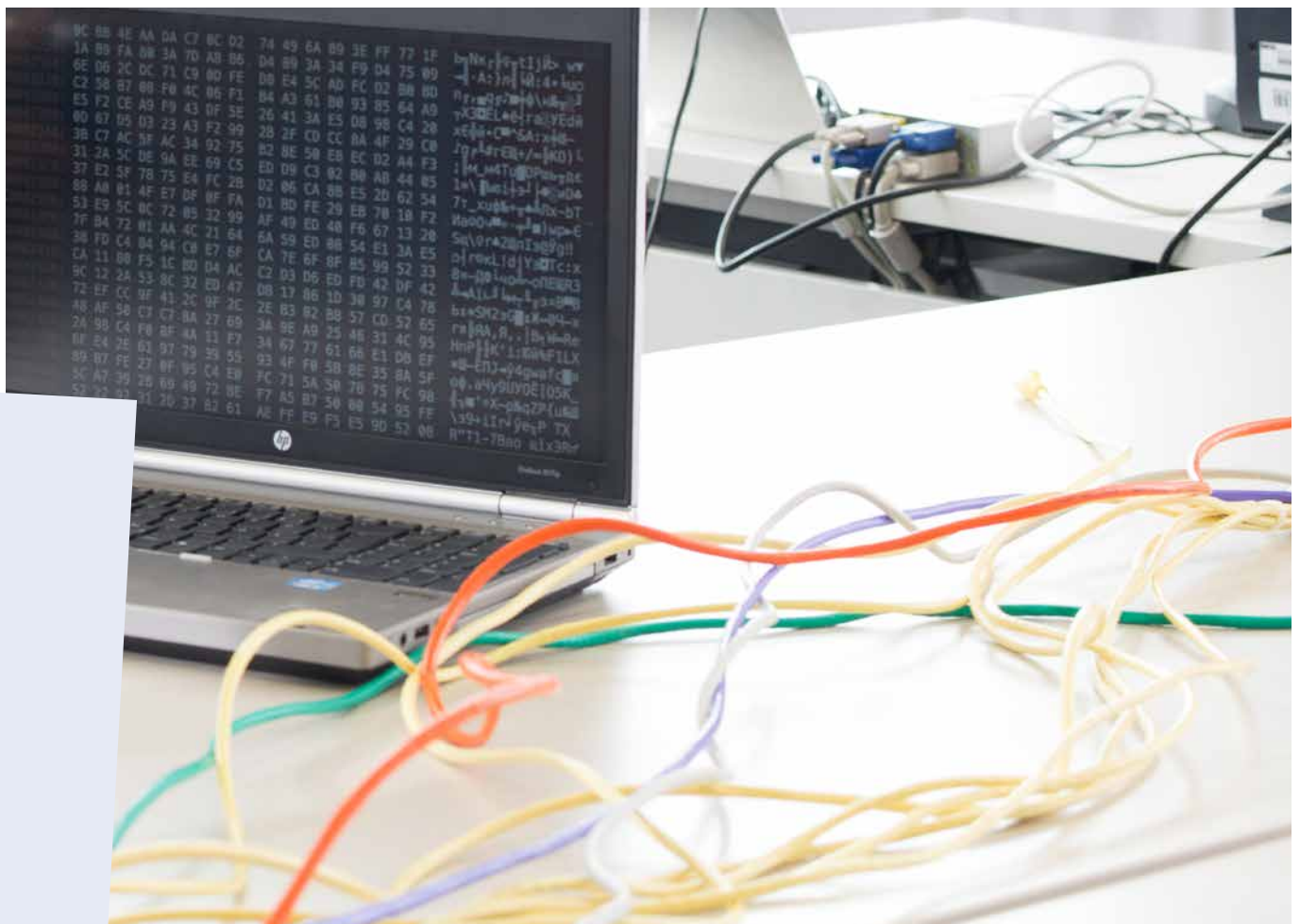
High-quality technical equipment and four modern network technology labs offer students every possibility to explore their talents and interests. Thanks to VPN solutions, students can use all resources outside the campus as well.

Focus on the professional field

The programme conveys all necessary competences for various career opportunities. Apart from in-depth knowledge in the field of computer science, it places particular emphasis on the writing of research proposals and the processing of research results. Under the guidance of experienced professors, the students gain all competences necessary for the writing of scientific publications.

Linguistic competence

The fact that the teaching language is English promotes the students' expressive skills. The writing of research proposals and publications in English prepares them for a career in the national and international research landscape.



Curriculum

1st year of studies

1 st semester	ECTS
Academic Research	3
Scientific Presentation	2
Theoretical Computer Science	5
Foundations of Science and Research	2
Design of Experiments	1
Mentoring	2
Design Thinking	3
Innovation, Research & Entrepreneurship	2
Research project I	10

2 nd semester	ECTS
Writing in technical disciplines and research	5
Computer Science – Data Science	5
Research Ethics	1
Legal Aspects of Research	2
Mentoring	2
Sources of Innovation	2
Systematic Innovation	3
Research project II	10

2nd year of studies

3 rd semester	ECTS
Writing of Research Proposals	2
Scientific Publishing: Conferences and Journals	3
Computer Science - Specialisation in the selected field of study	5
Research Methods	3
Mentoring	2
Innovation Management and Product Development	3
Organisation of Innovations	2
Research project III	10

4 th semester	ECTS
Master thesis	20
Research project IV	10

ECTS: European Credit Transfer System – measure for the overall workload an average student has in order to successfully complete a course. One credit (credit point) represents 25 study hours (including attendance, self-study, exams, etc.).



You can find the current curriculum online under „study content“:
fhstp.ac.at/mcs



 fhstp.ac.at

25 min.
from
Vienna

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Version: 7/2019