Trier University
of Applied Sciences

H O C H
S C H U L E
T R I E R

COMPUTER SCIENCE
Study Semesters

Trier University of Applied Sciences

More than 8 000 students research and study at our campuses in Trier, Idar-Oberstein and the Environmental Campus Birkenfeld, making us the largest University of Applied Sciences in Rhineland-Palatinate.

Our location in Germany's south western triangle border area creates the ideal conditions both for study and for a professional future with its access to international connections and its varied opportunities for employment in Luxembourg, France and Belgium.

Studying at Trier University of Applied Sciences means an education with a strong practical focus combined with a solid theoretical foundation, it includes supervised projects, and often a practical semester or a study semester abroad.

Through our excellent business contacts we can offer our students plenty of opportunities for applied research and work, thus ensuring our courses remain up-to-date and meet the demands of potential employers.

The Faculty of Computer Science was founded in 1994 and enrolls now more than 1000 students. Since the Winter Semester 2002 the department has been offering Bachelor's Degree (B.Sc.) and Master's Degree (M.Sc.) courses in Computer Science.

Over the years, we have successfully added new study programs in areas of Digital Media and Games (B.Sc.), Medical Informatics (B.Sc.), AI and Data Science (B.Sc. and M.Sc.) Business Information Systems (M.Sc.) and the distance education program in Computer Science (M.C.Sc.). Lately the department started a Bachelor's program in Logopedia, Physiotherapy and Occupational Therapy (B.Sc.).

The Study Semester program

consists of courses and projects taught in the English language. It runs each April to August (summer semester). Thus, you can chose a full semester of 30 ECTS in English.

On the Bachelor's level we offer a German language course, 2 courses in specialized areas of Computer Science, a seminar and a project in an area of expertise of one of our faculty members.

On the Master's level, we offer a German language course, 3 courses in specialized areas of Computer Science and one project in an area of expertise of one of our faculty members.

Taught courses are each 4 hours per week. Projects and seminars require a higher independent work and have less contact hours.

Bachelor Modules

German Language — 5 ECTS

Introductory course into the German language.

Business Information Systems — 5 ECTS

The students learn an overview and advantages of business software systems, especially ERP systems, and where these systems are used in business. A classification of Business Information Systems is given. After that, the role of Business Process Management and its relation to Business Information Systems are discussed. The lecture is completed by selected contemporary issues, e.g. Governance-Risk-Compliance (GRC), Cloud Computing, Mobile Computing, etc.

Seminar Web Technologies — 5 ECTS

Seminar in the field of Web Technologies. Presentation of scientific papers from recent conferences.

CS project — 10 ECTS

Project in an area of expertise of one of our faculty members, e.g. Game Development, Business Information Systems, Web Technologies, Mobile Systems, Software Engineering, Networks, Distributed Systems, Embedded Systems, Real-time Systems, Data Bases, Artificial Intelligence, Discrete Optimizations and Algorithms, CAD, ERP Software, Computer Graphics, Interactive Media, Medical Informatics. Topics have to be negotiated individually.

English friendly lectures

We offer several lectures in the "English friendly" format. In this case, the lecture is held in German, but all teaching materials are available in English. During the practical exercises that are part of the lecture, you will be supported by English-speaking assistants. They will also support you in case of comprehension problems with the contents of the lecture. If you are interested in this offer, please ask us for the current list of available courses.

Master Modules

German Language — 6 ECTS

Introductory course into the German Language

High Performance Computing — 6 ECTS

General paradigms for parallel programming, Using the Threading Building Blocks Library for CPU parallelism, Concepts of the task stealing scheduler, Efficient memory management for parallel systems, General parallelism concepts in TBB, Using CUDA for GPGPU computing, Concepts of GPGPU computing, Writing simple CUDA programs, Synchronization in CUDA, Streaming and overlapping in CUDA

Advanced Game Technology — 6 ECTS

The course deals with advanced methods of image synthesis, both for the interactive presentation, as well as for offline rendering. It is based on the state-of-the-art of research in computer graphics and includes the following topics: Physical Fundamentals of Light Propagation, Reflection Properties and Material Models, Image-Based Techniques, Photorealism, Procedural Modeling, Computer Animation, Volumetric Effects and Participating Media.

Project — 12 ECTS

Project in an area of expertise of one of our faculty members, e.g. Game Development, Business Information systems, Web Technologies, Mobile Systems, Software Engineering, Networks, Distributed Systems, Embedded Systems, Real-time Systems, Data Bases, Artificial Intelligence, Discrete Optimizations and Algorithms, CAD, ERP Software, Computer Graphics, Interactive Media, Medical Informatics. Topics have to be negotiated individually.

English friendly lectures — 6 ECTS

We offer several lectures in the "English friendly" format. In this case, the lecture is held in German, but all teaching materials are available in English. During the practical exercises that are part of the lecture, you will be supported by English-speaking assistants. They will also support you in case of comprehension problems with the contents of the lecture. If you are interested in this offer, please ask us for the current list of available courses.

Application

Applications should be submitted by 1st of October for the Study Semester of the following year's summer semester.

You can find the application forms under:
www.hochschule-trier.de/en/computer-science/studies/studysemester/

Admission Requirements

Sufficient knowledge of English to follow lectures.

Current enrolment in a course in Computer Science for at least two semesters.

Payment of student Service Contribution including free local transportation and subsidized meals approximately 400€ per semester.

Departmental address

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Trier

Trier has a population of more than 100,000, and is famous as the oldest city in Germany, founded around 16 AD. In 1984, it celebrated its 2000th anniversary. It was home to six Roman emperors and has preserved several monuments of this time including the impressive Porta Nigra, a four-story structure that was once part of the city's walls. "Roma Secunda", the second Rome, was another name for Trier, and nowhere else in Germany are Roman times so vividly recalled.

Located on the banks of the Mosel River, Trier lies in a valley between low vine-covered hills in the west of the state of Rhineland-Palatinate, near the German border with Luxembourg; in fact, the closest city to Trier is the capital of Luxembourg, some 50 km to the southwest. Its location is ideal for a student interested in seeing a lot of Europe, as it is less than a 30 minute drive from France and Belgium.

Trier is also the birthplace of Karl Marx and a university town, housing Trier University of Applied Sciences and Trier University, about 20,000 of its inhabitants are students. There is a large offer of cultural, geographical and leisure activities.