Hochschule Reutlingen
Reutlingen University

School of Informatics

Bachelor - Master - Research

Doctorates - HHZ - Partner

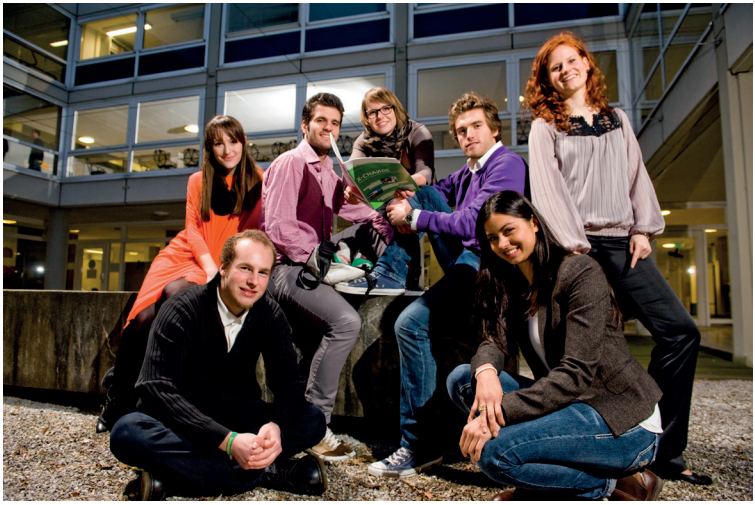
Hochschule Reutlingen
Reutlingen University

INF Informatik

About us

The University

Reutlingen University is one of the leading institutions of higher education for international and practical business training. More than 5 700 students study at our five schools: The **Schools of Applied Chemistry, Informatics, Engineering, Textiles & Design,** and the **ESB Business School**.



We are training the top executives of tomorrow in our 45 Bachelor's and Master's degree programmes. It is important to us to help our students in their personal development and to help make responsible employees and managers out of them.

Many rankings in recent years have underlined the quality of our programmes as well as our outstanding academic training. All of our degrees are accredited accordingly.

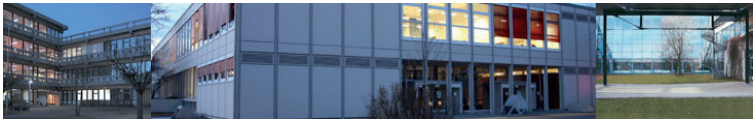
We work hand-in-hand with business, maintain close contacts with companies and participate in teaching and research networks; this enables us to strike an ideal balance between theory and practice.

Contact

Prof. Dr. Hendrik Brumme, President - Reutlingen University

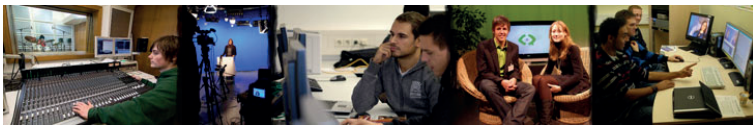
About us

The School



The Reutlingen University School of Informatics is one of the most successful faculties of computer science in Germany. External higher education rankings such as the CHE, Wirtschaftswoche and the U-multirank indicators have placed Reutlingen University highly for several years. This ranking comes as no surprise. In designing our programmes, we develop guidelines aimed at enabling students to optimize their studies and to improve their career prospects considerably.
All programmes are based on:

- Solid informatics foundations
- Broad, interdisciplinary knowledge of the subject
- Comprehensive methodological skills
- Social and communicative competence
- International experience



The School of Informatics offers Bachelor's programmes (Media and Communication Informatics, Medical Technical Informatics, Business Informatics) as well as Master's degree programmes (Human-Centered Computing, Digital Business Engineering, Business Informatics) at both the Reutlingen and Böblingen (HHZ) locations. Additionally, there are interdisciplinary Master's and advanced training programmes.

Following your studies, you can also complete a cooperative doctorate at Reutlingen University. Our many research projects and research groups provide the academic framework for doctorates. We also offer the doctoral colleges in Services Computing at the Herman Hollerith Center and in Intelligent Process and Materials Development in Biomateriomics (IPMB).

Contact

Prof. Dr. Oliver Burgert, Dean - School of Informatics

Bachelor

Media and Communication Informatics

This programme focuses chiefly on informatics (approx. 70%); this is complemented with various aspects of media and communications.
The goal is to train scientifically qualified computer scientists with special competence in software technology as well as in media and communications. They will then be able to work in informatic projects and to communicate with media experts.

Basic Informatics includes methods of algorithmisation and learning current programming concepts.
Media Content includes graphics, photography, the basic knowledge required for the creation and use of audio-visual media, as well as basic methods in computer graphics (e.g. 3D modelling, rendering).
Communication includes Internet protocols, the use and programming of mobile devices (smartphones, apps), distribution (e.g. in a cloud), interacting and exchanging messages. In addition, aspects of communication between humans and machines are discussed. In the last two semesters you have the opportunity to choose your individual areas of specialization by means of two elective subjects.

Programme details

Programme starts	Summer and winter semester
Duration	7 semesters
Semester abroad	Yes, voluntary
No. of places	36

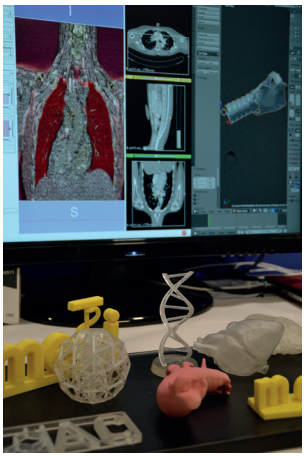
Bachelor

Medical Technical Informatics

The Bachelor's degree programme Medical Technical Informatics goes for seven semesters (incl. internship semester). Along with core content, this programme also gives students the **opportunity to specialize** in areas they select themselves. They may choose interesting electives in programmes such as Media and Communication Informatics, Business Informatics, and electives offered by Reutlingen University's other Schools (Engineering, Chemistry, Textiles & Design, ESB Business School).

basic study semesters 1 - 4 → company internship → specialization thesis

Our subjects have a **strong practical orientation**. They include specialist skills in medical informatics and image processing, medical data processing, programming medical equipment for diagnostics, treatment and rehabilitation; quality management and applications for medical information systems (E-health and mobile computing).
This programme is designed so that graduates are well able to work not only in medical fields, but also in all areas of computer science.



"I never thought that my work and my ideas could help countless people to treat disorders and even to save lives."

Programme details

Programme starts	Summer and winter semester
Duration	7 semesters
Semester abroad	Yes, voluntary
No. of places	18 / 36

Bachelor

Business Informatics

This programme deals equally with informatics and business administration. The later semesters increasingly include interdisciplinary classes and projects. The programme's **international orientation** is underlined by a semester abroad for students to gain international experience. Compulsory electives round off the programme and provide opportunities for in-depth or specialist studies.
In the final phase of the course students independently write an academic work (Bachelor's thesis) on a current issue in business informatics.

practical orientation

We emphasize the practical orientation of our degree programmes. The CHE ranking places us among Germany's most practically-oriented faculties. We achieve this with **practical projects and industry internships of several months**. These are integral parts of the programme. During their studies, students are in contact with potential employers. Many of our lecturers come from industry or are currently employed in successful businesses.

Programme details

Programme starts	Summer and winter semester
Duration	7 semesters
Semester abroad	Yes, obligatory
No. of places	40

Master

Human-Centered Computing

Informatics as it relates especially to humans is the focus of this degree programme. This includes both media and communications informatics as well as medical informatics. These two areas overlap in the programme's introductory classes, which for instance apply image processing algorithms to both fields.
The Master's programme core modules include: **Formal Methods, Interactive Systems, Cognitive Systems, Visualisation, Software Systems Technology** and **IT Management**.
Skills in these subjects are specifically developed by in-depth academic work and the Master's project. The VRlab is one example of a media-medicine combination Master's project. Results from in-depth academic work are presented at a student conference by Informatics Inside.

Our Human-Centered Computing Master's concept enables you to move seamlessly from your earlier Bachelor's degree to the contents of this programme.
We also offer **thematic specialization** which builds on the contents of the Bachelor's degrees in Media and Communication Informatics and Medical Technical Informatics. Thematic specialization is embedded in the **electives**, the Master's project, the **in-depth academic work** and in the thesis. Of the 90 ECTS credit points in your studies, 45 are obtained in these individually-chosen focus areas.

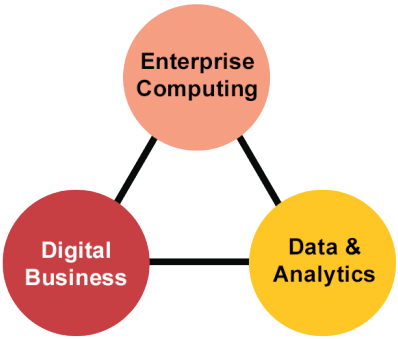
Programme details

Programme starts	Summer and winter semester
Duration	3 semesters
ECTS for admission	210
No. of places	15

Master

Business Informatics

The Business Informatics Master's programme builds on the knowledge from the student's earlier degree; therefore, a requirement is a Bachelor's degree in the same or a similar discipline. It prepares you for a high-level profession and offers the opportunity to develop your own **subject specialization**. Its conceptional core consists of a structured elective model. On the one hand, this anchors the interdisciplinary nature of business informatics and on the other hand enables specialization in one of three future-oriented disciplines.



The programme takes an **interdisciplinary** approach to informatics and business administration topics. It stands out due to its focus on current issues faced by many businesses, without limiting itself to any one sector. Along with the academic dimension, we also place special emphasis on teaching our students **methodological skills, social competence and problem-solving skills**. Much of the contents of the course correspond to the applied research areas of the professors teaching the programme. This ensures that the material is academically up-to-date, and for our students it also opens doors to professional academic careers.

Programme details

Programme starts	Summer and winter semester
Duration	3 semesters
ECTS for admission	210
No. of places	15

Master

Digital Business Engineering

Digital Business Engineering is a Master's programme with a strong focus on information technology at the Herman Hollerith Centre (HHZ) in Böblingen. It promotes students who are enthusiastic about new developments in the area of software and IT management and want to shape digital life and working environments. The programme enables the next career step in the digital transformation for those who are studying in parallel to current employment.

Students gain practical and in-depth education on:

- Strategic and technical know-how to successfully approach the digitization
- Scientific approach and engineering methods for IT based value-added processes
- Digital competency in innovative core areas of business informatics

With short intensive courses, studies can be flexibly organized. Students enjoy hands-on learning in living labs on Smart Retail, Smart Home und Smart City while reconciling their studies with their profession. Classes are held at the HHZ in Böblingen - the faculty's hub for research in digital business. Several classes are given by professors from the University of Stuttgart.

Programme details

Programme starts	Summer and winter semester
Duration	3 semester
ECTS for admission	210
No. of places	25

Master

Interdisciplinary Product Development

The Interdisciplinary Product Development course teaches participants how to tackle a problem as part of a team of experts from various disciplines; how to distribute the task among the sub-disciplines so that each expert can make the best use of the necessary space for his/her contribution to the overall result. The programme brings together the following disciplines:
Textile technology / Design with materials technology experience / Engineering (Mechanical, Mechatronics, Electrical) / Chemistry and process technology / Informatics

Programme details

Programme starts	Summer and winter semester
Duration	4 semesters
ECTS for admission	180
No. of places	15

Advanced Professional Traning

Master: Digital Business Management

Digital Business Management is an advanced training programme for professionals at Reutlingen University's Knowledge Foundation, and is studied at the Herman Hollerith Center in Böblingen. The Master of Science is dual, practical and placed at the point where management and information technology meets.

Master: Professional Software Engineering

Current IT trends like agility, cloud computing, DevOps or microservices have changed the job profile for software engineers dramatically over the past decade. The master program "Professional Software Engineering" conveys the necessary skills, competencies and knowledge about methods and technologies to master this challenge. Particularly, graduates are able to develop cloud-native applications.

Programme details

Programme starts	Summer and winter semester
Duration	4 semesters
ECTS for admission	180

Doctorates

Cooperative / Doctoral college

There are various options for those wanting to do a cooperative doctoral project at the School of Informatics. The doctoral colleges in Services Computing at the Herman Hollerith Center and in Intelligent Process and Materials Development in Biomateriomics (IPMB) are attractive choices. In addition, Reutlingen University has a cooperation agreement with the University of the West of Scotland (UWS). And there are further choices for cooperative doctorates in the form of cooperation between professors at the School and other universities.

Services Computing cooperative doctoral college

The cooperative individual doctorate of Services Computing at the University of Stuttgart and Reutlingen University's Herman Hollerith Center offers a high-quality environment for conducting cooperative doctoral projects in innovative areas for a total of 12 doctoral candidates. The college's research programme is strategically structured according to three major digital transformation themes, Enterprise Architecture and Applications, Data Management/Analytics, and Cloud Computing..

Cooperative doctoral college in Intelligent Process and Materials Development in Biomateriomics (IPMB)

The cooperative doctoral college in intelligent process and materials development in biomateriomics is a collaboration between the University of Tübingen and Reutlingen University, between the departments of Chemistry and Physics, and Applied Chemistry (LFZ PA&T) and Informatics. The Informatics subproject is: Self-optimising process analysis and synthesis approach to the production of biocompatible materials.

Contact

Prof. Dr. Cristóbal Curio

Prof. Dr. Alfred Zimmermann (HHZ)

Research

Research groups

Research at the School of Informatics is strongly oriented towards applications. Projects are often carried out in cooperation with partners from industry and other research institutes and institutions of higher education. The centralized Reutlingen Research Institute is responsible for the organization and administration of the projects.

Computer Assisted MEDicine (CAMED) research group

The CaMed research group brings together the School's research activities in the areas of computer-assisted surgery and therapy, computer-assisted diagnostics and planning, hospital information systems, rehabilitation, process support in the clinical environment, and personalized medicine/ support systems.

Research at the Herman Hollerith Center (HHZ)

The Herman Hollerith Center pools the research power of academics in the Services Computing field, as its coordinated contribution to cooperative research projects and cooperative doctoral qualification processes.

Contact

Prof. Dr. Cristóbal Curio

Prof. Dr. Alfred Zimmermann (HHZ)

Business

Our Partners in Industry

The School of Informatics works closely with businesses to promote practical training and research. Businesses can support this approach by joining into a partnership with the School. That helps young people along the road to their chosen profession. At the same time, it means the School's high-quality research and teaching can be further expanded.

Together with the university, the School of Informatics offers many different opportunities for close cooperation. Contact us to discuss individual opportunities for cooperation.

Our partners:

Kaufland

W&W wüstenrot württembergische

Contact

Prof. Dr. Josef Schürle

HHZ

Teaching and Research Center

The Herman Hollerith Teaching and Research Center (HHZ) is part of the School of Informatics at the University of Reutlingen and with its research is interconnected with the Reutlingen Research Institute.
Together with the University of Stuttgart and other partners from business and academia, we cover relevant subtopics in the field of business informatics in research and teaching. The HHZ as a Graduate School has a profile which includes teaching programmes for the Master of Science and the research centre as the coordinating research organization form cooperative research projects. The focus is on expanding cooperative doctoral qualification processes for outstanding graduates of our Master's programmes.

The HHZ tackles important innovative fields in business informatics with its Master's degree programmes in Digital Business Engineering, Digital Business Management, Professional Software Engineering, and connects them with key perspectives in current research: Digital business & digital transformation, business and software architecture for services & cloud computing, semantic support, management of business processes, performance management, big data management & analytics, telematics & internet of things, as well as concepts for supporting transformation plans for strategically directed digital business and for the accompanying information systems. The HHZ pursues an expressly interdisciplinary approach and links between business and IT.

Contact

Prof. Dr. Alexander Rossmann, Head of Research Center

International

Partnership Worldwide

International experience is a valuable key qualification in global competition. School of Informatics encourages and supports its students in the planning and carrying out of studies abroad. Comparable coursework completed abroad is recognized for studies in Reutlingen. The School has contacts with more than 20 attractive and reliable partners on five continents, including in the United States, China, Taiwan, Mexico, South Africa, Australia, and in many European countries.

It goes without saying that we will help you to find a suitable university so that you go to the right place for you. A number of different scholarships are available to help you finance your studies abroad.
The same goes for students from abroad seeking to study in Reutlingen. You are welcome here and we will be happy to offer advice and to help you get started in your desired programme.

The Reutlingen International Office is the university's central institution with the persons to contact for information on the international options for German and other students, as well as all teaching staff.

Contact

Prof. Dr. Natividad Martínez Madrid

Prof. Dr. Dennis Schlegel

Contact

School of Informatics, Reutlingen

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Herman Hollerith Center, Böblingen

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