



COURSE OF STUDY  
**APPLIED COMPUTER SCIENCE, M.SC.**



## Find your course!

SRH University Heidelberg is one of the largest and oldest private universities in Germany. About 3,400 students are currently enrolled in six faculties. We are offering innovative degrees in the schools of Business, Information, Media and Design, Engineering and Architecture, Applied Psychology, Therapeutic Sciences, and Social and Legal Sciences. Each of these interdisciplinary programs are continually developed in cooperation with experts from research and industry. The effective combination of theoretical knowledge and practical experience and the benefits of close cooperation between professors and students motivate our students to excellence.

# APPLIED COMPUTER SCIENCE, M.S.C.

## **Well-Connected!**

SRH University Heidelberg is located in the heart of one of the most dynamic business and computer science regions in Germany. World renowned companies such as SAP, Heidelberger Druckmaschinen AG, Heidelberg Cement, ABB, SAS, MLP, Springer Science, BASF and more are located nearby. This enables us to work together with a number of businesses and ensure practical relevance in our teaching. Special ex-cursions help to deepen our students' understanding on-site. You will learn scientific working methods and the ability to apply your own ideas in carrying out projects.

## **Quality in teaching confirmed!**

In the interest of consumer protection, Germany also ensures that private education providers guarantee a high scientific standard. This is certified through institutional accreditation of private universities by the German Scientific Council. The Scientific Council institutionally re-accredited the SRH University Heidelberg. In addition, SRH university Heidelberg regularly accredits and re-accredits all of the faculty's bachelor and master programs.

## **Go international!**

SRH University has a distinctly global perspective. We have a tradition of welcoming international students from all over the world. Our international students come from nearly fifty countries. By keeping class sizes small and mixing nationalities, students are able to experience different languages and cultures. Our "International Office" frequently organizes cultural events such as inviting international students to do presentations on their home countries, try international food and drinks, and participate in local cultural events and social activities.



## CAMPUS AND CITY LIFE

We provide our students with an excellent atmosphere for studying and living. The campus offers a wide range of services and facilities, including a cafeteria, sports club, student dormitories, a park, and a 24/7 library and more. Connections to Heidelberg city center are excellent. It only takes 10 minutes by bus or tram. Our Central Students' Service helps students with on campus accommodation, registration with the local authorities, student bank accounts, finding your way around town and more.

Heidelberg is one of the oldest cities in Germany, known for its historical

architecture and a center of learning, science, and research. The fact that Heidelberg is home to many renowned universities and research institutions has earned it the title 'university town'. Heidelberg is a safe and vibrant city with an envied choice of cultural and leisure activities – Heidelberg Castle, markets, boat trips on the river Neckar, theatre, concerts, films, pubs and the list continues.

Further information is available on our departmental website:

<http://www.hochschule-heidelberg.de/en/international/>

# SUPPLEMENT

## **Tuition fees – Invest in your future!**

We are a private, officially recognized university. The tuition fees enable us to offer you excellent teaching and an optimal study environment.

The current tuition fees can be found on our website under the Academic program description.

## **Ways of funding**

Besides the classic German BAFöG grant, there are numerous other ways to finance your studies.

We can advise you as to which of the following models might be an option for you:

- BAFöG
- Student loan from the KfW Group (subsidies bank)
- Student Educational Fund
- Scholarship programs

## **Networks & practice**

We cooperate with a wide range of companies and our teaching is practice-oriented. Field trips are provided to support your studies.

However, during your studies you also learn to work scientifically and to incorporate your ideas in projects.

## **Approved accreditation**

In 2009, the German Science Council granted the SRH University Heidelberg accreditation as an official institution for another 10 years.

## **Study abroad!**

Anyone who wants to experience the culture and language of another country should study abroad. A semester or internship abroad considerably increases your chances of success when applying for a job.

We offer options that range from semesters and internships abroad to doctoral studies. Our information events inform students about the opportunities and requirements. At the moment, approximately 30% of our students spend time abroad during their studies.

# DISCOVER THE CORE-PRINCIPLE: A NEW STYLE IN LEARNING



## CORE – OUR NEW STUDY MODEL

The “**CORE-Principle**” – **Competence Oriented Research and Education** – places the acquisition of occupational competence at the center of your studies. This approach goes far beyond the delivery of theoretical knowledge. After your graduation, you will start your career with a great sense of self-confidence. Our students possess everything needed for a successful career: knowledge, competence, expertise and key skills.



### I **The competence model**

The term occupational competence denotes all the skills that enable you to act independently and successfully in the labor market! Occupational competence can be attained at many levels by acquiring professional competence, methodological competence, self-competence and social competence

### I **Subject-Oriented 5-Week Blocks**

Instead of having to deal with numerous subjects at the same time, you can focus entirely on a maximum of two subjects within one 5-week period.

### I **Activating Teaching and Learning Methods**

To ensure that students remember what they are learning, we take a practical approach to teaching, using case studies, seminars, team projects, role plays and presentations.

### I **Competence-Based Examination Methods**

From the profusion of examination methods available we choose the me-

thod that best fits the skills taught in a particular module. Scheduling a great number of exams within a short period of time is now a thing of the past thanks to the new program.

### I **Personal responsibility**

Only if you take responsibility for your own actions and how you study, will you be able to excel and take on responsibility in business life – for yourself and for others.

### I **Best Employability**

Our graduates are capable of proving themselves in a real business environment after their studies.

### I **Learning partnership**

In their roles as mentors and coaches, the teaching staff assist the students in every way possible, be it subject-specific content, study organization or in personal matters.

# A MASTER'S DEGREE IN COMPUTER SCIENCE OPENS DOORS!

**This international program is taught in English and is designed to bring students from a variety of backgrounds and cultures together to facilitate cross-cultural learning experiences. The goal of this program is to provide the students with key competencies in all layers of full stack development in the informatics field.**

## Program content

The curriculum includes a wide range of main modules, such as International Project Management, Software Architecture, IT Security, Advanced Database, Software Development Practice, Advanced Computer Studies. The students are guided into the standard areas of full stack development (Front End, Middleware, Backend / databases and infrastructure) as well as in their individual specialization. Further specializations are:

### ■ Business Computing

Applied Research, In Memory Databases (SAP HANA), Business Information System Technology (SAP Technology), Business

Information Programming (SAP ABAP), Service Engineering and Management, Internet and Network Technologies

### ■ Mobile Computing

Applied Research, Advanced Game Design, Augmented and Virtual Reality, Applied Artificial Intelligence and Machine Learning, Developing Mobile Applications and Games

### ■ Usability Engineering and UX-Design

Applied Research, Fundamentals towards UX, UX-Design and Implementation, Usability Testing and Verification

## Practical experience

By means of "guided study" applied learning methods are tailored to each student's individual strengths. This allows students to choose an area of specialisation during their studies for developing individual skills and competencies. During an integrated internship with one of our partner companies the students will have the opportunity to apply their new skills in a real-world scenario. With the big Research Project, you will strengthen your scientific competencies for a research-oriented Master Thesis and a scientific career later on.

# AT A GLANCE

## APPLIED COMPUTER SCIENCE, M.SC.

### Duration of study

- ▮ 24 months (120 ECTS)

### Start

- ▮ Every year on 1st April and 1st October

### Admission requirements

- ▮ Recognised bachelor's degree (180 ECTS, or 210 ECTS for exceptional case) or German Diplom in Computer Science, "Virtuelle Realitäten," "Angewandte Informatik," "Wirtschaftsinformatik," Information Technology, Software Engineering/ Software Development or similar
  - ▮ Good knowledge in Java/C++ and databases
  - ▮ Course language: English, Proof of English: IELTS 6.5/TOEFL 80 or other proof of English proficiency
- Master Thesis can be written in German

### Degree

- ▮ Master of Science (M.Sc.)

### Tuition Fees

- ▮ 750 EUR per month
- ▮ One-time registration fee of 750 EUR or 1,000 EUR for applicants from countries with visa obligations. For payment regulations see more details on our website.

# STRUCTURE OF THE MASTER PROGRAMME

The program is organized in modules with an overall workload of 120 credit points. The course is comprised of lectures, seminars, tutorials, internships and interdisciplinary project work.

The table is an overview of the program's general structure, October start, 2 years program, 120 CP. We are offering an April start with a similar structure.

Semester 1		Modul 1	Modul 2	Modul 3	Modul 4	Credits
	Course	International Project Management	Software Development Practice	Distributed Databases	Specialization I	
	Course	8	8	8	8	32 ECTS
Semester 2		Modul 5	Modul 6	Modul 7	Modul 8	
	Course	Software Architecture and Development	Advance Computer Science	Spezialisation II	Current Topics in Computer Science	
	Course	8	8	8	4	28 ECTS
Semester 3		Modul 9	Modul 10	Modul 11		
	Course	IT-Security	Spezialisation III	Research Project or Internship		
	Course	8	8	14		30 ECTS
Semester 4		Modul 12				
	Course	Master Thesis and Thesis Seminar				
	Course	30				30 ECTS
						<b>120 ECTS</b>

## SPECIALIZATIONS



### Specialization Business Computing

- Applied Research
- Business Information Programming (SAP ABAP)
- Business Information System Technology (SAP Technology)
- In Memory Databases (SAP HANA)
- Internet & Network Technologies
- Service Engineering & Management

### Specialization Mobile Computing

- Advanced Game Design
- Applied Artificial Intelligence
- Applied Research
- Developing Mobile Applications Systems
- Developing Mobile Games
- Developing Smart Learning
- Internet & Network Technologies

### Specialization Usability Engineering and UX Design

- Applied Research
- Fundamentals towards UX
- Internet- & Network Technology
- Usability Testing & Verification
- UX-Design & Implementation

## CAREER PROSPECTS!

A master's degree in Applied Computer Science increases your chances of securing a lucrative position in the software and IT industry. With our master's program, which covers all areas of a Full Stack Developer or Full Stack IT Consultant, you will acquire the necessary knowledge and skills required for the job. Our graduates are working for large enterprises such as AIRBUS, ADIDAS, AUDI, BOSCH, BMW, BASF, DEUTSCHE BOERSE, DKFZ, SAP, TRIMUPH, VERIVOX, etc. and many more small and medium sized companies. Our program is also accredited for senior positions in the public sector. Furthermore, a master's degree qualifies for research e.g. doctoral studies.

### Positions you will be qualified for

- Structural and object-orientated software development in the fields of advanced engineering and architecture.
- Systems analyst and system designer for large and medium-sized ERP systems.
- Technical and process-oriented consulting, e.g. project manager with international competencies.
- Computer game developer, multimedia designer, network administrator, database manager, web designer, to name but a few.

### How to apply

Our master's program in informatics starts every year on April 1st and October 1st. We look forward to receiving your application, which should include:

- CV with current photo
- Certificate of language proficiency
- Certified copy of Credentials (e.g. High School Transcripts, University Transcripts, Language tests)
- 1 Letters of recommendation
- Statement of Purpose and Goals
- Practical experience if available

You can apply online or download an application form at [www.hochschule-heidelberg.de/en](http://www.hochschule-heidelberg.de/en)

## REPORTS OF EXPERIENCES



"I completed my master's in Informatics from SRH University in 2018. Though, I am from Mechanical Engineering background, the study courses offered at SRH helped me to gain adequate knowledge and finally led me to be a part of SAP. Currently, I am working as a Devops Engineer at SAP SE. In fact, the courses offered at SRH have assisted me in getting my desired job. I thoroughly enjoyed all the courses and the guidance provided by the professors, eventually helped me to be successful in my career. To me, the success always lies on the side of hard work and eventually hard work pays off. Hence, never give up your dreams."

**Srinikitha Kondreddy, Graduate M.Sc. Applied Computer Science 2018**



"I studied Business Informatics (B.Sc.) and Applied Computer Sciences (M.Sc.) from 2011 to 2016 at the SRH University of Applied Sciences. The practice-oriented lectures always helped me to apply the content of a lecture on challenging exercises and exciting projects. A great opportunity was to work on a project for three consecutive modules which allowed our team of four students to develop a full-stack cloud application including all aspects that make up a well-managed project. We really felt like a startup while staying in close contact to Professors to gather feedback and benefit from their experience. After a few semesters I started to work as a working student to apply my learnings to real life business scenarios. This combination allowed me to holistically extend my skill-set along the path to becoming a Software Engineer and, most importantly, to be able to do a job that I enjoy every day."

**Tim Gerlach, Graduate M.Sc. Applied Computer Science 2017**

## CONTACT



### **Questions?**

We would be happy to talk to you on the phone at one of our University info days or in person by appointment.

### **Just contact**

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## IN BRIEF: THE PLUS FOR YOU

### Unique learning

The content of the course addresses the current and future needs of all modern industries using information systems – from business to consumer applications. The CORE-principal insures a high level of knowledge, competencies, expertise and key skills.

### Multiple perspectives

You finish your studies with a „Master of Science“ degree. This enables you not only to do a doctorate or access the higher grades of Civil Services – it also opens up attractive, worldwide and diversified fields of activity in companies.



### Intercultural competencies

Business behavior that respects cultural differences, knowledge of international business relations and markets, proficiency in two foreign languages – we help you become globally mobile.



This QR-Code will take your mobile to our homepage.

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