Faculty of Mathematics and Technology:
B.Sc. in Sports Medical Engineering

HOCHSCHULE KOBLENZ
UNIVERSITY OF APPLIED SCIENCES
RheinAhrCampus

Enthusiasm for sports has been part of our campus culture ever since it was established. The implementation of the highly successful Sports Management Program has led to numerous contacts and links to active top athletes and important decision makers in the sports sector. Recent guest lecturers included Christoph Metzelder and Dr. Theo Zwanziger.

Thus, it is hardly surprising that the degree course in Medical Engineering also included a concentration area in Sports Medical Engineering, which helped our faculty to establish links to national and international research institutes and companies working at the intersections of sports and technologies.

Due to high student demand and due to the excellent successes of our graduates in the job market, the Faculty of Mathematics has decided to turn the concentration area Sports Medical Engineering into an independent degree course.

This degree course targets candidates with a strong interest in natural sciences and a genuine interest in sports as an application area for research and development. Graduates of this degree course will often work in areas such as health care, fitness and rehabilitation.

The challenge: Sports Medical Engineering

The rapid development in the sector of sports equipment and materials, combined with a miniaturization of sensor technology, has led to a rapid increase in demand for specialists with an in-depth knowledge of the technologies involved.

Even in mass sports, there is an increasing demand for intelligent training control – which has generated a growing need for multi-sensor monitoring devices with direct analysis of vital functions, e.g. in a smart phone or tablet PC environment. In the not-too-distant future, demographic change will lead to a situation where multi-sensor measurements will be more widely utilized in the area of home care, thus ensuring a higher level of independence for as many elderly people as possible.

The need for specialist with a high level of scientific and technical know-how, combined with a solid background in sports-medical and fitness-related topics, is obvious – as this sector is by nature interdisciplinary and diverse.

Fields of career:

Graduates of Sports Medical Engineering are qualified for complex tasks in various areas, e.g.

- research and development (e.g. in industry, higher education and research centers)
- manufacturing and quality control
- marketing and sales
- teaching, training, education as well as skill development
- technical consulting

Topics of study:

The basics in terms of mathematics and physics, computer science and engineering are covered during the first three semesters. In the fourth and fifth semesters, additional competencies in engineering and the specialization modules are offered – providing students with a profound and practice-oriented knowledge concerning some key areas of sports-medical engineering.

Admission requirements:

- Advanced technical college certificate *(Fachhochschulreife)*, qualification for university entrance (*Abitur)* or recognized international equivalent.
- For non-native speakers of German: evidence of proficiency in German

Application for registration is possible for the summer or the winter term.

Final degree: Bachelor of Science (B.Sc.)

Duration of study:

Students typically attain their degree after three years of study (180 ECTS – including a practical term and a final thesis).

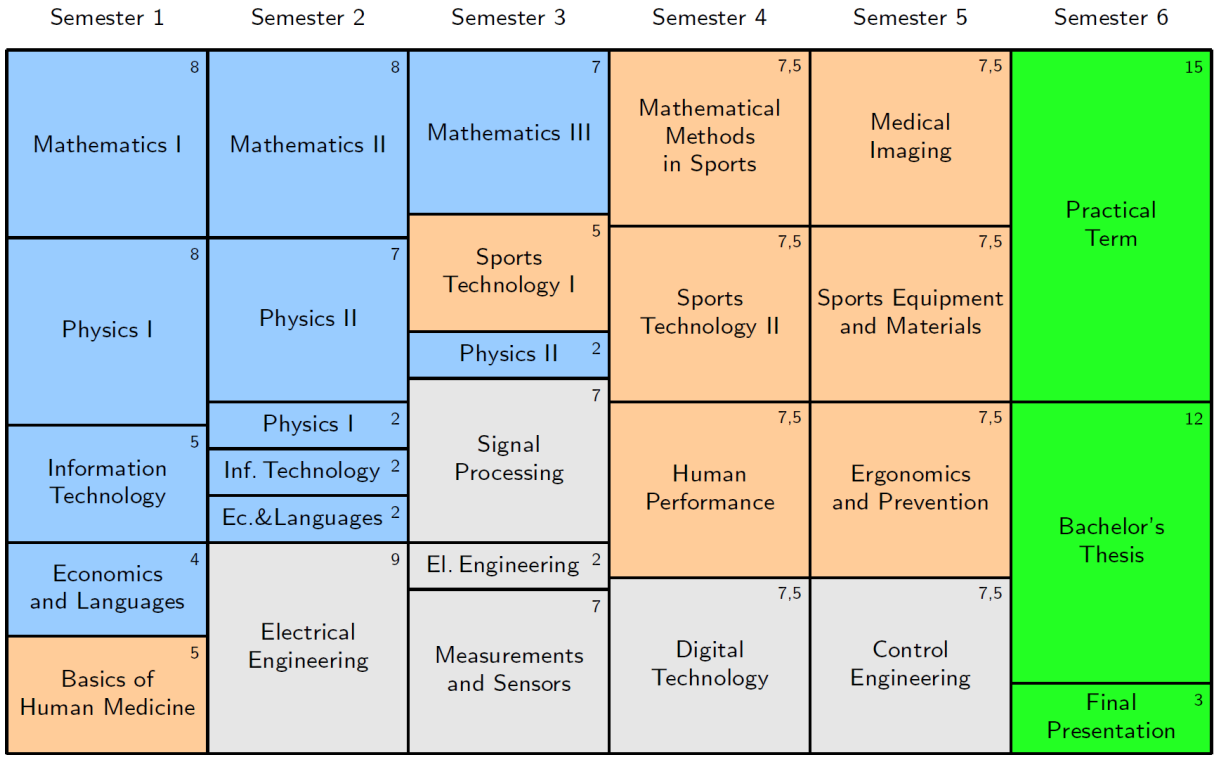
Contact:

Course Director: Prof. Dr. Ulrich Hartmann
Secretary: Waltraud Ott
Tel: +49 (0) 2642/932-386 (Fax: -399)
http://www.rheinahrcampus.de

Faculty of Mathematics and Technology:
B.Sc. in Sports Medical Engineering

HOCHSCHULE KOBLENZ
UNIVERSITY OF APPLIED SCIENCES
RheinAhrCampus

Structure of the Course/Curriculum:



Please note that the B.Sc. programs in **Engineering** are also available for two other areas of specialisation (Medical Engineering, Optics and Laser Engineering). Please refer to the respective course descriptions for more information.

Successful completion of this B.Sc. degree qualifies a student for acceptance onto a Master's degree, e.g. our M.Sc. Program in Applied Physics. Specific regulations may apply.