The study program offered by the Bremen University of Applied Sciences is innovative and practically oriented. About 8,000 students from 70 bachelor and master degree courses are studying at the university. The innovative contents yield excellent international career prospects.

www.hs-bremen.de

**Master degree course Biomimetics**

More detailed information regarding contents and admission requirements of the masters program "Biomimetics: Motion Systems" can be found at:

www.bionik-bremen.de

**Biomimetics-Innovation-Centre (B-I-C)**

The B-I-C focuses on fundamental research in the field of biomimetics as well as industrial application. Additionally, several activities in biomimetics (education, networking between science and industry, public relations) are organized and coordinated.

www.bionik-bremen.de

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**Contact**

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Biomimetics: Motion Systems

Master of Science

Objective

Biomimetics: “Learning from the achievements of biological evolution for innovating technology”

Challenge

Analyzing and evaluating complex biological structures and mechanical systems with regard to their potential application.

Developing sustainable and advanced concepts and products.

Concept / Structure

The consecutive masters program "Biomimetics: Motion Systems" offers a research oriented, interdisciplinary degree course focusing on biological as well as engineering knowledge and is completed with the degree "Master of Science" (M.Sc.). A connection to the European education system is guaranteed by modularization and implementation of the ECT-system.

The standard period of study is three semesters including the master's thesis. During this time, the students will gain expertise in animal locomotion, abstraction processes and the application into technical (transport-)systems.

Career Prospects

After the completion of the course, numerous job opportunities will become available to the graduates. These include activities in research and development of innovative, sustainable technologies such as:

- Jobs in the field of "man-machine-interaction"
- Energy engineering
- Robotics
- Automotive industry
- Aerospace industry
- Supply industry
- Engineering and design offices
- Various research institutes

Contents

The degree course enables students to acquire competences in experimental work and computer-based simulations for the analysis and abstraction of locomotion systems and their application into technical concepts. Tools and techniques like digital particle image velocimetry (DPIV), highspeed analysis, bodytracking, computational fluid dynamics (CFD) and multiple-body simulation of terrestrial locomotion systems are used to analyze phenomena in aquatic, aerial and terrestrial locomotion.

Additionally, the students gain social skills by working in international and interdisciplinary teams.