

Master of Science in

BIOMEDICAL ENGINEERING



As the first of its kind in the GCC region, the Master of Science in Biomedical Engineering (MSBME) is a dynamic, multidisciplinary program that will prepare you for an advanced career or doctoral studies in the rapidly developing field of biomedical engineering.

Making a difference through science

The AUS MSBME helps professionals within the expanding field of biomedical engineering to meaningfully contribute to scientific developments, positively impacting individuals and communities everywhere. Graduates of the program go onto work in the following areas:

- **medical research**
- **design and development of biomedical devices, materials and algorithms**
- **design of biomedical equipment management systems**
- **safety and acceptance testing**
- **hospital planning**
- **creation of technical specifications for new biomedical equipment**
- **training for nurses and physicians**
- **regulation**



The AUS graduate assistantship provided me with an opportunity to achieve hands-on cognizance that paved the way towards me reaching my goals. With experienced and auxiliary edifiers throughout the courses, the MSBME program offers unique courses every semester, enhancing different areas of student expertise.

Syeda Leena Mumtaz | AUS Master of Science in Biomedical Engineering student



Active biomedical research projects at AUS

As part of the MSBME program, you can partake in quality research across a number of areas, including:

- **cognitive vigilance assessment and enhancement**
- **brain source localization in epilepsy**
- **severity assessment of spinal cord injury**
- **efficient failure management in an IoT environment**
- **operating room scheduling**
- **ultrasound and liposomes in the treatment of prostate cancer**
- **design and characterization of flexible implantable electrodes**
- **intelligent patient monitoring and diagnosis**
- **use of microwave tomography in bone healing monitoring**
- **MEMS device for real-time monitoring of mercury concentration in marine aquacultures**
- **volumetric image generation for lung cancer image-guided radiation therapy**
- **characterizing neuronal morphology in different visual cortical areas in ferrets**
- **sustainability-oriented innovation in healthcare: a supply chain approach**
- **liposomes-based signal amplification immunoassay for detection of cardiac troponin**
- **design and synthesis of first-in-class nature-inspired compounds: targeting mitochondrial metabolism as novel anti-cancer treatment**

Graduate students have the opportunity to work with faculty to publish their work in leading international engineering and scientific journals.

Graduate assistantships and employment

AUS offers graduate students assistantships and work-study opportunities. These are awarded on a competitive basis, coming in the form of a Graduate Research Assistantship or Graduate Teaching Assistantship. This offers not only financial assistance but also hands-on experience in teaching and research helpful to students interested in pursuing a career in academia.



Find out more

www.aus.edu/cen/msbme
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