

# BSc (Hons) in Biomedical Engineering

## 生物醫學工程（榮譽）理學士

### INTRODUCTION

Biomedical Engineering (BME) is an interdisciplinary field that integrates engineering and life sciences to enable engineering innovations for biomedical applications. BME applies engineering principles and techniques in understanding life phenomena and in solving technical problems in the biomedical context. BME covers different areas, including Medical Imaging and Biosensing; Molecular and Cellular Engineering; Neuromusculoskeletal Science and Engineering; Sports Science and Technology; and Prosthetics, Orthotics, and Rehabilitation, for the purposes of health promotion & protection, health assessment & medical diagnosis, acute medical & surgical interventions, athletic performance enhancement & injury prevention, and rehabilitation. This evolving field requires professionals who understand health issues and offer engineering solutions. Our programme, BSc (Hons) in Biomedical Engineering, equips students with a solid foundation in both engineering technology and health/sport sciences. Graduates can work in the medical device or sports product industry, public/private healthcare/sports sector, as well as academic and research institutions.



### CURRICULUM OVERVIEW

#### Foundation Studies

- Physics
- Chemistry
- Mathematics
- Human Physiology
- Human Pathophysiology
- Computer Programming

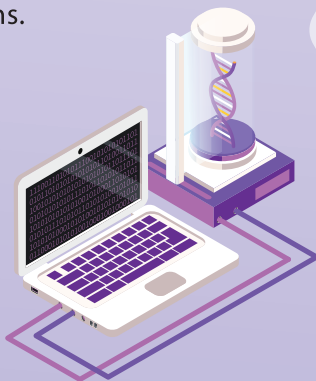
#### Integrated BME Studies

- Biomechanics
- Medical Device Regulation
- Applied Electrophysiology
- Biomedical Engineering in Society
- Biomaterials Science and Engineering
- Engineering Design & Biomechatronics
- Rehabilitation Engineering and Assistive Technology
- Biomedical Engineering Innovation for the Community

#### Study Option

- Biomedical Engineering Stream
- Biomedical Engineering with Prosthetics and Orthotics Stream
- Biomedical Engineering with Sports Science and Technology\* (pending approval)

*[Students can be considered for enrollment in one of the Secondary Major in Artificial Intelligence and Data Analytics (AIDA) OR Innovation and Entrepreneurship (IE)]*



Contact Us



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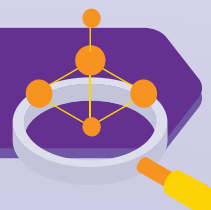
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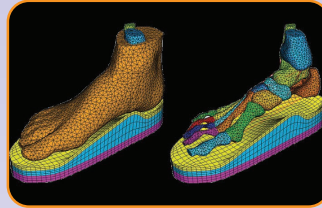




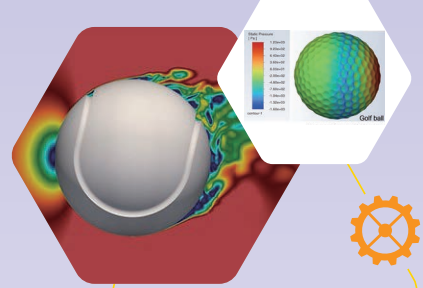
» **Radiation-Free 3D Ultrasound Scoliosis Assessment System**



» **Computer-aided design and computer-aided manufacturing (CAD/CAM)**



» **Foot & footwear modelling**



» **Golf and Tennis Ball Aerodynamics**



» **Mobile Exoneuromusculoskeletons**



» **Motion and Force Analysis**



» **Upper-limb orthotics**



» **Swimmer's Muscle Activity Measurement**



## PROFESSIONAL RECOGNITION

The programme has been granted full accreditation from the Hong Kong Institution of Engineers (HKIE).

Students who complete the prosthetics or orthotics subjects offered in the programme are eligible to sit for the certification examination of the Hong Kong Society of Certified Prosthetist-Orthotists (HKSCPO). This programme has also been accredited by the International Society for Prosthetics and Orthotics (ISPO) as a Category I professional programme.

## CAREER PROSPECTS

### Professional Engineering Practice

Working in medical device or sports product industrial settings, hospitals, the government, medical device regulatory firms, or other biomedical institutions, graduates will apply their knowledge in biomedical engineering pursuing industrial jobs. This includes engineering research and development, engineering design and product development, regulatory and business aspects of engineering, such as sales, marketing, and technical management.

### Professional Clinical Practice

Working in hospitals and healthcare sectors, including prosthetists and orthotists, clinical and rehabilitation engineers, hospital scientific officers, and healthcare product customer services.

### Basic and Applied Research in Engineering, Biology, or Medicine

Graduates can conduct basic and applied research at universities, hospitals, and industries in the area of biomedical engineering.

## ENTRANCE REQUIREMENTS

### JUPAS Applicants

Satisfy the University's general entrance requirements of 4 core and 2 elective subjects with:

- Level 3 in English Language, Chinese Language, and 2 elective subjects [extended module of Mathematics (M1/M2) is treated as a single subject]; and
- Level 2 in Mathematics; and
- Attained 'Citizenship and Social Development'

We give the highest weighting in the calculation of admission scores to the following subjects:

- Mathematics
- M1/M2
- All single and combined science subjects

The 'best' 5 HKDSE subjects [after subject weightings have been applied] will be taken into account.

### Non-JUPAS Applicants

Scan the QR code for more information.

