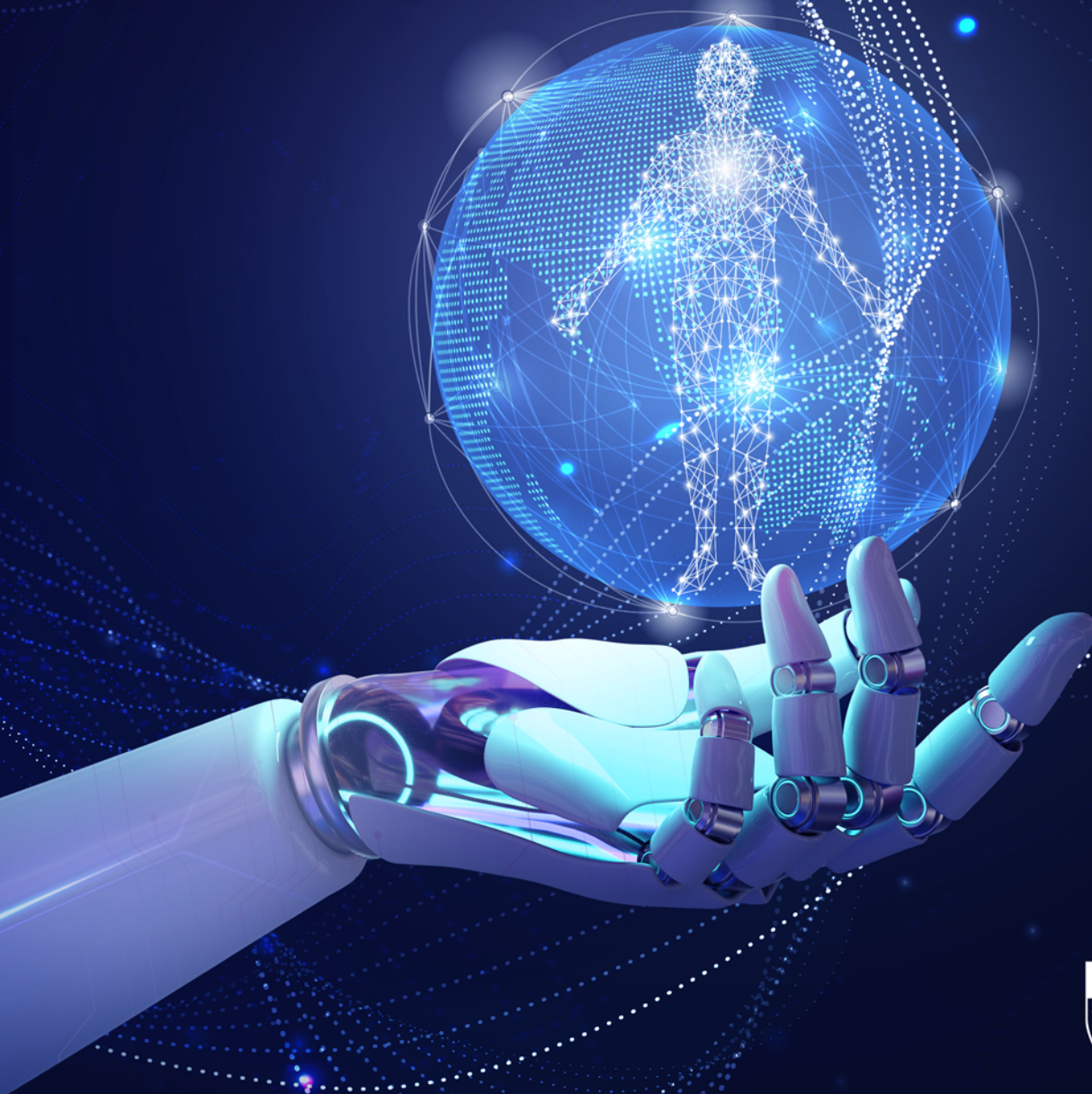


MAKE AN IMPACT

Master of Science
Biomedical Engineering



PROGRAMME OVERVIEW

With the growing demand for healthcare innovation in recent years as well as the projected long-term prominence of healthcare issues in our aging society, biomedical engineers play crucial roles in the expanding healthcare sector.

At NUS BME, we provide an integrated education where we equip future engineers with the ability to analyse and address challenges in healthcare with both engineering and biomedical perspectives.



UNIQUE FEATURES OF THE PROGRAMME



Global Leading University



Award-winning Educators



World-class Curriculum

Singapore

Singapore is Asia's premier biomedical and technology hub and a leading global city with a highly multicultural society, a great place to live and study.



Department

The Department of Biomedical Engineering has more than 30 academic staff, a number of whom have joint appointments with various departments such as Pharmacology, Medicine, Surgery, and Biochemistry, as well as research institutes such as N.I Institute for Health, iHealthTech, Mechanobiology Institute, and A*STAR Institutes.

The Department now occupies a state-of-the-art **Engineering in Medicine**, building a world-leading hub for the development of affordable and accessible medical technology.

> 9 REASONS WHY YOU SHOULD STUDY AT NUS



> WHAT CAN THE PROGRAM DO FOR YOU?



Develop systems and design thinking skills in the medical technology field.



Develop transferable soft skills necessary to interface with management, clinicians, healthcare workers, regulatory bodies, and other engineers.



Prepare you to work effectively in multidisciplinary environments.



Develop and apply technical knowledge in Biomedical Engineering transferrable to the industry.



> CAREER PROSPECTS

Biomedical engineers have found employment in various areas and organizations including:



Healthcare and Research

National University Hospital, JurongHealth, Duke-NUS, A*STAR, Mechanobiology Institute, etc.



Medical Technology

3M, Medtronic, GE Healthcare, TriReme Medical, Biotronik, Biosensors International, Johnson & Johnson, ZEISS, etc.



Pharmaceutical and Biotechnology

Thermo Fisher Scientific, GlaxoSmithKline, Roche, Edwards Lifesciences, Vela Diagnostics, Osteopore International, etc.



Start-ups

PatSnap, Hannah life technologies, Biolidics, Flexosense, sunbirdbio, KYAN Therapeutics, Roceso Technologies, etc.

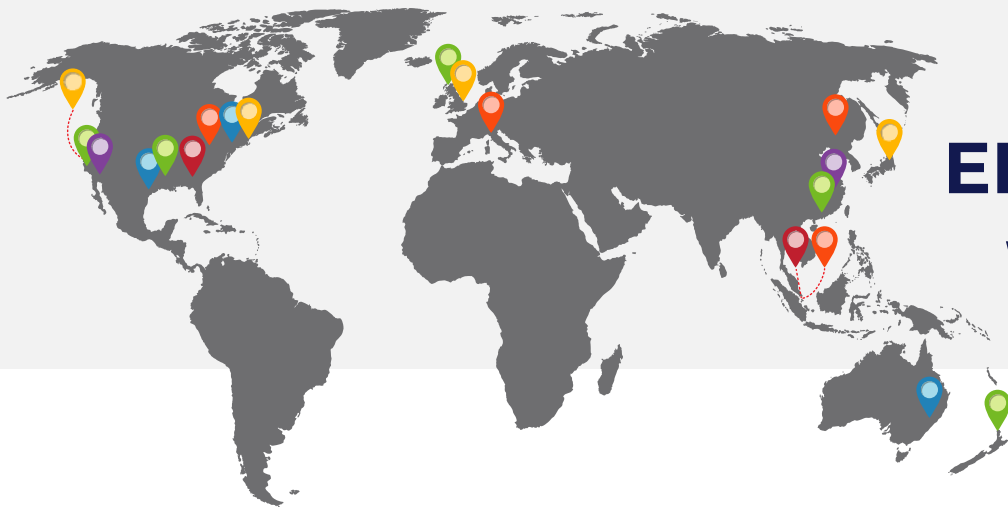
JOB ROLES

- **Manufacturing Engineer (Medical Devices)**
- **Quality Engineer**
- **Regulatory Officer**
- **Biomedical Scientist Researcher**
- **Medical Technology Professionals**
- **Healthcare Consultant**
- **Hospital Biomedical Engineer**
- **Healthcare Data Analyst**
- **MedTech Entrepreneur**



> EXCELLENCE IN TEACHING, RESEARCH & INNOVATION

Our faculty have received multiple prestigious teaching, innovation and research awards.



WORLD < CLASS EDUCATORS

Our faculty were trained in top Universities around the world.

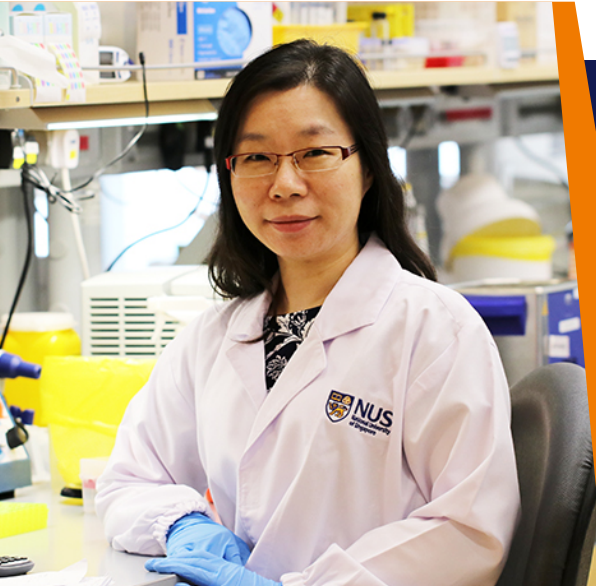
> MORE THAN 15 NO. OF START-UPS

Founded by our faculty & alumni.



> MAKING AN IMPACT

Our faculty are actively contributing to the fight against COVID-19.



Prof Shao Huilin

Director of Laboratory for Multiscale Molecular Diagnostics

enVision, enzyme-assisted nanocomplexes for visual identification of nucleic acids test platform for fast detection of the COVID-19 virus in 30 minutes.

Prof Lim Chwee Teck

Director of iHealthTech

Epidax, a point-of-care diagnostic system for COVID-19, is portable, easy to use and completes the screening in about an hour.



Prof Dean Ho

HOD of NUS BME and Director of NUS Institute for Digital Medicine

IDentif.AI, an artificial intelligence (AI) platform and live virus testing to derive an optimal combination of drugs with the correct dosages to treat Covid-19.



> HIGHLIGHTS OF THE PROGRAM



BIOMEDICAL ENGINEERING SYSTEMS

This module will provide a systematic approach to the development of the state-of-the-art medical devices and systems. Students will learn about the processes of unmet needs identification, problem statement, technical innovations, IP strategies, clinical trials and regulatory approval. The module will allow students to build and apply the skills in design and development of novel medical devices and systems.



BIOSENSORS AND BIOCHIPS

Taught by leading experts in biosensors, this module will cover the exciting development of biosensors and biochips and their working principles. Biosensors have been widely used in healthcare for numerous applications, including diagnosis, disease detection, treatment, and health monitoring and management, while Biochips are emerging as new technologies for healthcare applications.



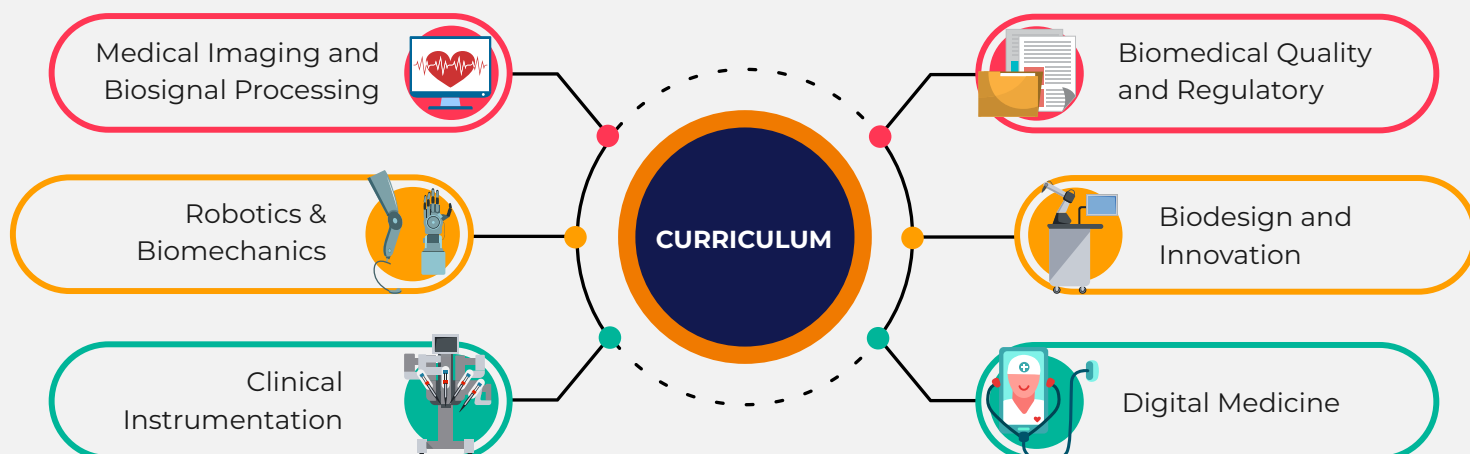
TISSUE ENGINEERING

Student will learn to nurture an appreciation of how tissue engineering will influence healthcare, acquire a basic understanding of the central principles of tissue engineering, and derive a working knowledge of how engineers can participate in tissue engineering research and commercial applications.



DIGITAL HEALTHCARE AND MEDICINE

As digital solutions are becoming increasingly pervasive in the healthcare industry, this module will provide an overview of the most recent tools and strategies that are being employed in the diagnosis and treatment of most prevalent diseases such as cancer and infectious diseases, amongst others. Applications of artificial intelligence and machine learning techniques will be described with examples that are relevant to the modern healthcare industry.



> HOW TO APPLY

For more information, please visit our website:



NUS Biomedical Engineering

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Block 4, #04-08

Singapore 117583