MATERIALS ENGINEERING
WITH A SECOND MAJOR IN
MEDICAL BIOLOGY
Biomedical and biological materials science is a new and emerging field at the interface of materials science and biology. The emergence of the discipline is due in part to the advent of regenerative medicine, which requires biomaterials that interact with the body in a specific and predictable manner. In today’s world, materials designed for usage with biological systems as well as materials derived from biological systems for medical and other applications are rising in importance. To fully participate in the exciting new sphere, a strong foundation in both materials science and medical biology is essential.

The structure of the Bachelor of Materials Engineering with a Second Major in Medical Biology programme integrates the requirements of both majors within the typical candidature of 4 years.

Students must meet all the requirements for the Bachelor of Materials Engineering programme and fulfill the following conditions:

1. Complete a Biomaterials-related Final Year Project; and
2. Choose at least two major prescribed electives from the following list:
   - Advanced Analysis of Materials
   - Biomedical Devices
   - Drug Delivery and Tissue Engineering

In addition, students will read the following compulsory courses for the Second Major in Medical Biology programme:

**Foundation Courses:**
- Biophysical Chemistry
- Biochemistry I
- Bioinformatics and Statistics
- Experimental Molecular and Cell Biology

Choose three courses from the following list:
- Bioentrepreneurship
- Biomaging
- Biochemistry II
- Biology of Aging
- Drug Discovery and Development, Biotechnology
- Synthetic Biology
- Introductory Biology
- Molecular and Cell Biology I
- Molecular and Cell Biology II
- Physiology
- Undergraduate Advanced Experimental Biology (UAEB) Workshop (Series I) – Applied Biophysics
- Undergraduate Advanced Experimental Biology (UAEB) Workshop (Series I) – Methods in Histology

*List of courses is subject to changes

Graduates will enjoy the flexibility of choosing from a wide range of career options and roles in diverse industries, in addition to biomedical industries both locally and abroad.

**Possible Career Paths:**
- Biotechnology Firms
- Consumer Goods
- Food and Nutrition
- Healthcare
- Pharmaceutical
- Research and Development
- Medical Devices
- MedTech Analyst
- R&D professional / Manager
- Regulatory Scientist
- Scientist
- Technical Specialist
- Technopreneur / Innovator

The tuition fees for the Bachelor of Materials Engineering with a Second Major in Medical Biology programme will be pegged to the fees for Bachelor of Engineering programmes. Eligible students may be considered for scholarships that offer fully subsidised tuition fees and living allowances. Terms and conditions apply. For more information on tuition fees and scholarships, please visit http://admissions.ntu.edu.sg.

The Washington Accord is an international agreement for mutual recognition of substantial equivalence of engineering academic programmes worldwide in satisfying the academic requirements for the practice of engineering at a professional level.

For more information and enquiries on the Bachelor of Materials Engineering with a Second Major in Medical Biology programme, please visit http://coe.ntu.edu.sg/MedBio.
Admission Enquiries
Office of Admissions and Financial Aid
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Website: www.ntu.edu.sg/admissions

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