NUS National University of Singapore | Yong Loo Lin School of Medicine

MASTER OF SCIENCE IN

APPLIED BIOMEDICINE

Advancing Biomedicine Expertise in Vaccinology, Infectious Diseases, and Drug Development

WELCOME TO THE MASTER OF SCIENCE IN APPLIED BIOMEDICINE

We created this future-focused programme to help meet the rising need for skilled biomedical professionals in today's complex healthcare landscape.

As the first of its kind in Asia, this programme was established in the wake of the COVID-19 pandemic to address urgent global challenges such as infectious diseases, vaccine development, immunotherapies, and drugs design. One of its unique strengths lies in our dedicated courses on leadership in biomedicine and bio-innovation, preparing students for real-world impact across research, healthcare, and industry.

Backed by a multidisciplinary teaching team and a curriculum rooted in real-world relevance, the programme offers a supportive and collaborative learning environment guided by faculty who are experts in their fields.

We are committed to equipping you with the knowledge, skills, and adaptability to lead in biomedical innovation.

We welcome aspiring biomedical professionals from diverse backgrounds and experiences, and look forward to supporting you on your journey to make a meaningful impact in biomedicine and healthcare.

Associate Professor Tan Shyong Wei, Kevin

Programme Director, MSc in Applied Biomedicine

Associate Professor and Head,
Department of Microbiology and Immunology,
NUS Yong Loo Lin School of Medicine

PROGRAMME AT A GLANCE

The Master of Science in Applied Biomedicine (MSc ABM) at the NUS Yong Loo Lin School of Medicine is a coursework-based programme designed to prepare the next generation of biomedical professionals for the challenges of today's healthcare landscape.

You'll have the opportunity to focus on one of three specialisation areas — Vaccinology and Immunotherapy, Infectious Diseases Management, and Drug Discovery and Development — or pursue a general track that spans across disciplines.

Through MSc ABM, you'll build the skills and adaptability to lead in fast-evolving biomedical environments, from research institutes and hospitals to regulatory agencies and industry. This prepares you for impactful roles in advancing global health, whether in infectious diseases, vaccine development, or therapeutic innovation.

Gain Specialised, Updated Knowledge in Biomedicine

Develop expertise in pharmacology and toxicology to understand how medicines work and ensure their safety.

Build Leadership and Bio-Innovation Capabilities

Address challenges in sustainable and innovative drug development through a multidisciplinary approach.

Learn From Singapore's Pandemic Experience

Gain a comprehensive understanding of the entire drug development lifecycle, from preclinical research to clinical trials.

World-Class Faculty

Learn from and collaborate with industry and clinical leaders for hands-on experience and real-world insights.

Internationally Recognised Master's Degree

Earn a master's degree from Asia's leading medical school, opening doors to advanced education and global opportunities.

STUDY MODE

Full-time 1 year

Part-time 2 years

TUITION FEES

For AY2027/2028:

S$61,300 (incl. GST)

PROGRAMME STRUCTURE

Specialisation

(Vaccinology and Immunotherapy, Infectious Diseases Management, or Drug Discovery and Development)

Core Courses	Compulsory Elective Courses	Elective Courses
Complete 4 core courses ABM5001 Leadership Evidence and Applied Development ABM5002 Advanced Biostatistics for Research ABM5005 Advanced Agile Project Management for Biomedicine Practitioners BMI5101B Advanced Biomedical Informatics	**Complete 5 compulsory courses within the chosen specialisation**	**Choose either: Capstone Project OR 2 elective courses***
12 units in total	**20 units in total**	**8 units in total**
Total: 40 Units To Graduate		

*If a course has already been taken as a compulsory requirement in the specialisation, it cannot be counted again as an elective.

Non-Specialisation

Core Courses	Elective Courses
Complete 4 core courses ABM5001 Leadership Evidence and Applied Development ABM5002 Advanced Biostatistics for Research ABM5005 Advanced Agile Project Management for Biomedicine Practitioners BMI5101B Advanced Biomedical Informatics	**Choose a combination of elective courses For example: 1 Capstone Project (8 units) + 5 elective courses (20 units in total)**
12 units in total	**28 units in total**
Total: 40 Units To Graduate	

Courses taken beyond the required 40 units for graduation may be subject to additional tuition fees. Please refer to our programme webpage for details.

Explore the programme curriculum, study plan, and other details on our programme webpage.

CORE COURSES

ABM5001

Leadership Evidence and Applied Development

- Understand core leadership principles
- Build practical leadership and team skills
- Apply leadership in healthcare and research contexts

ABM5002

Advanced Biostatistics for Research

- Learn biostatistical concepts that uses numerical techniques to extract key insights
- Analyse data, quantify uncertainty, and communicate scientific findings clearly
- Apply statistical methods to real-world datasets using Excel, Stata, R, and SPSS

ABM5005

Advanced Agile Project Management for Biomedicine Practitioners

- Apply Agile and Scrum methodologies in biomedical project management
- Develop product backlogs and user stories to guide project delivery
- Enhance project outcomes through adaptive planning and continuous feedback

BMI5101B

Advanced Biomedical Informatics

- Learn foundational and advanced informatics concepts
- Understand data ethics and legal frameworks
- Apply knowledge to real-world biomedical problems

For the full breakdown of core and elective courses, visit our programme webpage.

CAREER POSSIBILITIES

Medical Technologists

Regulatory Specialists

Research Scientists

Toxicologists

Biochemists

Microbiologists

As well as other management and leadership positions in the biomedical field.

TRUSTED VOICES

"Being able to gain a deeper understanding of biomedicine through this programme has been extremely beneficial to my professional growth... (and) with its completion, I see myself a step closer to becoming a subject matter expert."

- Julia Tang, Class of 2024

"Through this process, I realised that scientfic research isn't just about laboratory experiments, it's also about transforming results into real market and social value. This learning experience (at MSc ABM) taught me to think independently and take initiative in seeking out more meaningful opportunities (at work)."

- Bi Jiaqi, Class of 2024

WHO SHOULD APPLY?

The programme welcomes **local and international** applicants from biomedical and health-related fields. It is ideal for:

Recent graduates

in life sciences, bioengineering, or medicine

Working professionals

in healthcare, pharmaceutical, or biotechnology sectors

Specialists

such as immunologists and applied scientists advancing innovation in biomedical research or education

KEY ADMISSION REQUIREMENTS

Academic and Professional Background

Bachelor's (preferably Honours) degree in M.B.B.S., Life Sciences (e.g., Biochemistry, Cell Biology, Molecular Biology), Bioengineering, Biotechnology, or a related Health Sciences discipline

Other qualifications with relevant experience may be considered on a case-by-case basis

Language Proficiency

International applicants whose undergraduate education was not conducted in English must demonstrate proficiency with a minimum TOEFL score of 85 (Internet-based) or an IELTS Academic score of 6.0

Please note that admission is competitive, and meeting the minimum requirements does not guarantee entry into the programme.

REQUIRED DOCUMENTS FOR APPLICATION

- Statement of Intent showcasing academic strength, research interests, motivation to study, and long-term development goals
- Curriculum Vitae (CV) providing an overview of relevant experience, skills and qualifications, and accomplishments
- Degree Certificate and University Transcripts
- TOEFL / IELTS Scoresheet (if applicable)
- Financial Support Documents

Visit our programme webpage for the full list of supporting documents required for your application.

UPCOMING INTAKE

August 2027

APPLICATION PERIOD

1 October 2026 - 30 April 2027

FEE REBATES AND FUNDING

- Singaporeans and Singapore PRs: 40% tuition fee rebate
- NUS Alumni: 20% tuition fee rebate
- Tuition fees may be offset using SkillsFuture Credit

For the most up-to-date information on tuition fees, payment schedule, and available grants or funding support, please visit our programme webpage.

DEPARTMENT OF MICROBIOLOGY AND IMMUNOLOGY

The MSc in Applied Biomedicine is led by the **Department of Microbiology and Immunology**, one of the longest-standing departments at NUS Medicine. Recognised for its excellence in biomedical research, it addresses diverse scientific questions through a wide range of experimental approaches and techniques. Its deep expertise and critical insights drive the programme's focus on innovation, bio-leadership, and applied research.

The programme is co-led by the **Department of Pharmacology**, which brings robust strengths in pharmacology, therapeutics, and drug development, supported by decades of experience in postgraduate education. Together, both departments offer a rich and interdisciplinary learning environment that equips students with strong scientific foundations, practical skills, and leadership readiness to take on evolving roles across biomedical research and the healthcare industry.

Learn more about the Department of Microbiology and Immunology at https://medicine.nus.edu.sg/mbio
For updates and news, follow @nusmicroimmuno on

Learn more about the Department of Pharmacology at https://medicine.nus.edu.sg/medphc
For updates and news, follow @medphc on and @nuspharmacology on

THE NUS MEDICINE ADVANTAGE

1st
QS & THE (Asia)

13th
THE (World)

17th
QS (World)

At the National University of Singapore (NUS), students receive a world-class education at one of the top global universities. The Yong Loo Lin School of Medicine is Asia's leading medical school, offering an exceptional opportunity to pursue advanced medical education.

Known for producing healthcare professionals who are innovators and leaders, its global reputation, paired with its focus on fostering critical thinking and innovation, makes its graduates highly sought after in both research and clinical settings. A master's degree from NUS Medicine is an investment in a future of leadership, expertise, and meaningful impact in the healthcare industry.

Statistics Source: Times Higher Education (THE) World University Rankings by Subject 2026: Medical and Health and Quacquarelli Symonds (QS) World University Rankings by Subject 2026: Medicine

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SCAN QR TO START YOUR APPLICATION

Master of Science in Applied Biomedicine (MSc ABM)

For general enquiries, please email **dgsmarketing@nus.edu.sg**
For programme-specific enquiries, please contact **mscabm@nus.edu.sg**

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