



3 years



February, July and October



RM48,960 Malaysian student
RM55,680 International student
2024 fees per year



Internship

CAREER PATHS

Our graduates find employment in:

- clinical laboratories
- forensic science
- medical, healthcare and insurance industry
- regulatory affairs and quality assurance
- biomedical equipment and pharmaceutical industry
- infectious disease/histopathology research
- science journalism
- clinical trial management
- clinical nutrition.

BACHELOR OF MEDICAL BIOSCIENCE

KPT/JPT (R/721/6/0040) 06/24 - MQA/SWA0795

Delve into the science at the centre of healthcare.

Medical Bioscience is at the heart of the understanding of the human body, healthcare, disease and biosciences. Explore a diverse spectrum of interconnected life science subjects, facilitated by cutting-edge laboratories that facilitate learning and a nurturing ground for honing research skills.

Yet, this program is far from confining you solely to microscopic observation. It takes a holistic approach, integrating hands-on fieldwork with immersive laboratory experiences and meaningful engagements within community health organisations, research institutes and pharmaceutical industries. This program not only imparts professional training and theoretical knowledge but also fosters a well-rounded, adaptable skill set.

What truly distinguishes this degree is its bespoke design to harmonise with the Malaysian context. A distinctive emphasis is placed on unravelling medical bioscience within the tropical environment. As such, it hones your proficiency in tropical medicine techniques, aligning your education with the region's unique healthcare dynamics. Moreover, the program opens the door to embarking on a research experience, delving deep into a medical bioscience subject of your passion.

Our facilities

You'll have access to well-equipped laboratories to support your studies and the development of research skills, with facilities for DNA sequencing, mass spectrometry, confocal microscopy, flow cytometry, high performance liquid chromatography, microbiology and tissue culture. A highlight is the Life Science Instrument Room, a dedicated space housing specialised laboratory equipment that supports science discoveries and excellent research output. In this facility, you'll use and learn the latest technology in medical bioscience.

Areas of study

You can study a broad range of topics in:

- biology
- recombinant DNA technology
- chemistry
- biochemistry
- cellular metabolism
- immunology
- anatomy
- microbiology
- pathology
- pharmacology
- toxicology.

Course structure

The course develops through two themes – foundation biomedical sciences and scientific practice, and human health – that culminate in biomedical science practice through a biomedical science internship.

A. FOUNDATION BIOMEDICAL SCIENCES AND SCIENTIFIC PRACTICE

These studies provide the scientific foundations for a career in biomedical science with a focus on medical/molecular diagnostics and medical biotechnology. You'll gain knowledge in the areas of biology, recombinant DNA technology, molecular biology, microbiology, chemistry and skills in diagnostic techniques, clinical work practices and scientific communication. You'll gain an understanding of the core elements of modern science by looking at scientific discovery through history and the skills to assess the validity of scientific information. The focus of these studies is skills development and professional application and practice in the laboratory and workplaces.

B. HUMAN HEALTH

The focus of these studies is scientific principles, concepts and skills in the areas of science relevant to the field of biomedical science. These include anatomy, human physiology, immunology, cellular metabolism/biochemistry, medical microbiology, pathology, pharmacology, physiology of human health systems and the functional immune system of multicellular organisms and the diseases states that result from pathogen infection and from autoimmunity. You'll learn how the human body systems act together to perform complex body functions.

C. INTERNSHIP

You'll undergo a minimum of eight weeks work-based training in hospitals and medical research centres, where you'll have the opportunity to integrate the various strands of your learning in a real workplace.

Our students have interned with:

- Sunway Medical Centre
- Pantai Hospital
- Assunta Hospital
- Tawakal Hospital
- Pathology and Diagnostic laboratory
- Pantai Premier Pathology
- Ace Labsystem.

D. FREE ELECTIVE STUDY

This will enable you to further your knowledge in your choice of units from any school, including units from other science courses.

SAMPLE COURSE MAP¹ (FEBRUARY INTAKE)

What your course will look like

YEAR 1		UNITS		
Semester 1 24 Credit points	BIO1011 Blueprints for life 6 Credit points	CHM1051 Chemistry 1 advanced 6 Credit points	SCI1020 Introduction to statistical reasoning 6 Credit points	BTH1802 Fundamentals of biotechnology 6 Credit points
Semester 2 24 Credit points	BIO1022 Life on Earth 6 Credit points	CHM1052 Chemistry 2 advanced 6 Credit points	ANT1800 Introduction to anatomy 6 Credit points	Elective 6 Credit points
YEAR 2		UNITS		
Semester 1 24 Credit points	BTH2741 Biochemistry and metabolism of biomolecules 6 Credit points	BTH2830 Fundamentals of microbiology 6 Credit points	SCI2010 Scientific practice and communication 6 Credit points	PHY2810 Physiology of human body systems 6 Credit points
Semester 2 24 Credit points	BTH2732 Recombinant DNA technology 6 Credit points	BTH2752 Cellular metabolomics of macronutrients 6 Credit points	PHY2820 Physiology of human health 6 Credit points	Elective 6 Credit points
Summer semester²	MBS3800 Medical bioscience internship 6 Credit points			
YEAR 3		UNITS		
Semester 1 18 Credit points	PHA3800 Fundamentals of toxicology 6 Credit points	HUP3810 Principles of pathology 1 6 Credit points	PHA3801 Principles of pharmacology 6 Credit points	
Semester 2 24 Credit points	BTH3752 Molecular biology and biotechnology 6 Credit points	BTH3722 Medical microbiology 6 Credit points	HUP3820 Principles of pathology 2 6 Credit points	IMM3802 Essentials of applied immunology 6 Credit points

Foundation biomedical sciences and scientific practice
Human health
Internship
Free elective study

¹ This course map is intended as a rough guide. Units listed may vary depending on intake, availability and the latest requirements.

² Depending on your intake, the summer semester may commence before your third year or in between semesters of your third year.



My biggest career goal as a gut microbiome researcher is to deepen our understanding of the microbiome and its impact on human health. I believe that the gut microbiome is a key player in many diseases and that by studying it, we can develop new treatments and interventions to improve health outcomes. By conducting cutting-edge research and developing new treatments and interventions, I hope to help patients overcome these diseases and live healthier, happier lives.”

HOOI SUET LI

Bachelor of Medical Bioscience

Bachelor of Science (Honours)

Data Scientist, AMILI