



BIOMEDICAL SCIENCE

Together, Learning for Health



Biomedical Science

The increase in the occurrence of existing diseases and the continual emergence of new or exotic diseases and re-emergence of old diseases place increasing demands on healthcare delivery. In Malaysia, there has been rapid growth in the healthcare system over the past few years. An efficient laboratory service is essential for a good healthcare system.

Appropriate healthcare management relies greatly on results of clinical laboratory investigations and patients' lives may depend on the experience and expertise of the Biomedical Scientist.

Malaysia has a vision to become a developed country by 2020. Much emphasis is given to various high-technology projects including biomedical research. Promotion of biomedical research is essential for progress of medicine and advancement of healthcare.

The Biomedical Scientist, equipped with the appropriate knowledge and expertise, evolves with the changing trends in modern technology to fulfill the trust and reliance expected of them.

“The IMU Biomedical Science programme is uniquely designed to produce graduates who are knowledgeable, competent and analytical.

The curriculum also emphasise on developing professionalism, ethics, lifelong learners and critical thinkers.

Students will be able to develop knowledge, skills and attitudes through in-house training, practical attachments as well as apprenticeship in selected disciplines. Students will also have the experience of undertaking a research project. All this training will produce readily employable graduates.”

A/PROF GNANAJOTHY PONNUDURAI

Associate Professor and
Programme Coordinator
BSc, MSc, PhD (UM)

01 | What are the aims of the programme?

- Biomedical science is the study of basic sciences that relate to medicine including biochemistry, genetics, microbiology, parasitology, pharmacology, haematology, immunology, histopathology and cytopathology.
- The IMU Biomedical Science programme has been designed for students who wish to gain an understanding of the basic sciences that are related to medicine and to develop skills in different biomedical areas.
- The aim of this programme is to provide training for undergraduate biomedical science students that would prepare them to work effectively in healthcare services which includes diagnostics, therapeutics, determining the nature of diseases, quality control, prevention, control and treatment of diseases.
- This programme also aims to provide the students with technical and analytical skills to carry out biomedical research. Furthermore, the programme also prepares them to pursue postgraduate studies in a range of disciplines.

02 | What are the key features of the programme?

The programme has incorporated key features to prepare the modern biomedical scientist. These features offer an appreciable advantage by enabling students:

- To have a sound knowledge of the functioning of the human body in physiological and pathological states via the body-organ systems courses.
- To develop knowledge, skills and attitudes through a structured in-house learning experience. The learning experience will be delivered through various teaching-learning approaches. In-house practical sessions will be conducted using simulated and clinical specimens.
- To gain practical experience while working under close supervision alongside experts in the respective biomedical science disciplines, through attachments at appropriate hospitals, diagnostic laboratories, university and/or research laboratories.
- To develop further laboratory experience and expertise while working as an apprentice, under minimal supervision. This period of attachment as an apprentice provides an opportunity to demonstrate the trainee's expertise in a prospective employment environment and a long-term career prospect.
- To acquire knowledge, skills and attitudes relating to the biomedical science disciplines which would prepare the graduate for further training in postgraduate biomedical science programmes, and where feasible, medicine and allied health sciences.

KEY FACTS

DEGREE

Bachelor of Science (Hons)
Biomedical Science (IMU) or
Biomedical Science degree from
Partner Universities

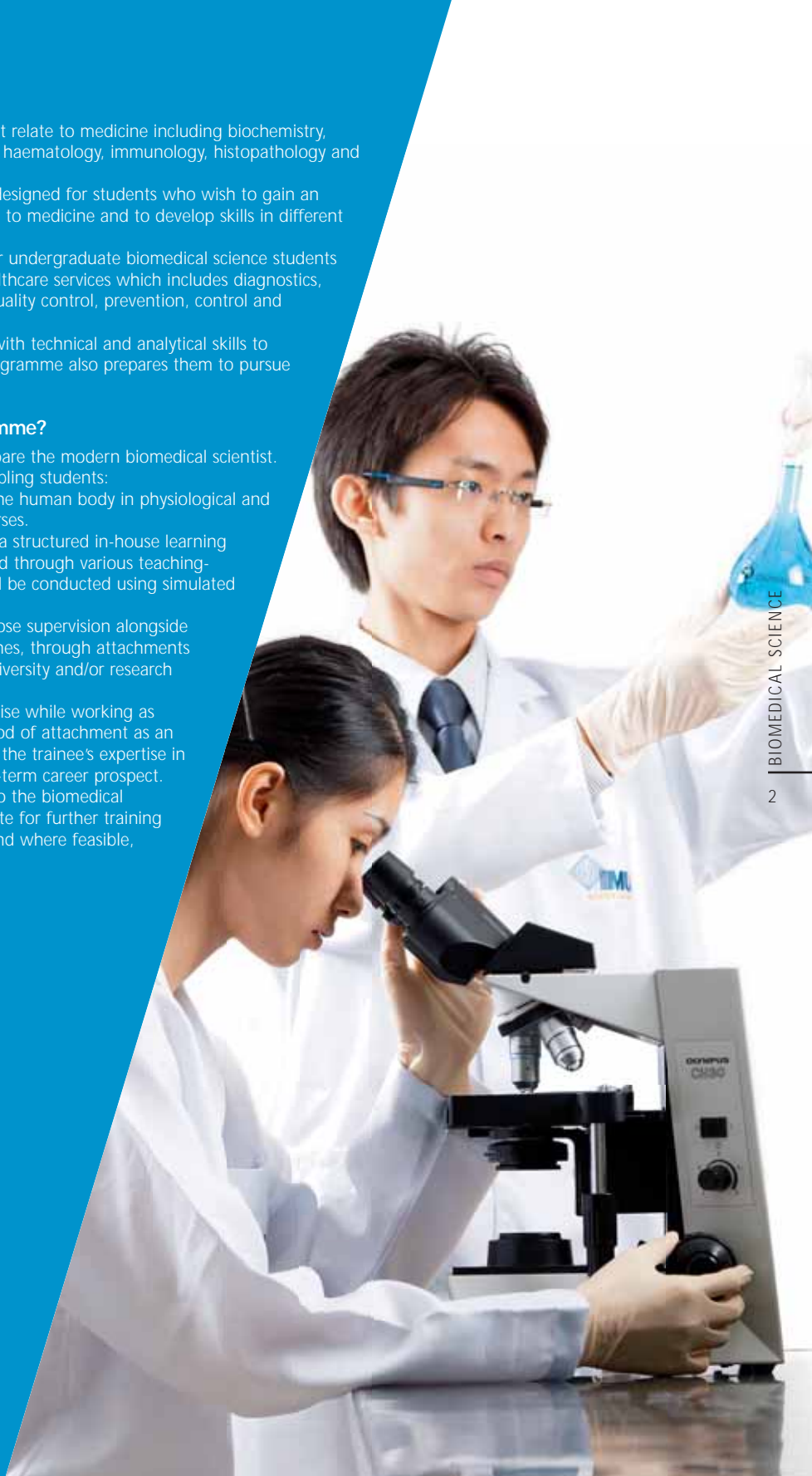
TOTAL DURATION

3 - 4 years

INTAKE

July

Credit transfer options to the
University of Newcastle, Australia
and University of Otago, New
Zealand.



- To develop professionalism. Opportunities will be given to the students to put theory into practice in their development as an effective member of the healthcare team.
- To develop their curiosity and enthusiasm for the biomedical sciences through student-centred learning activities including Portfolios of Learning, Problem-Based Learning and Research Projects.

03 | What are the teaching-learning approaches used?

In addition to didactic large group teaching sessions (Plenaries), the programme is also delivered through small group teaching sessions (Problem-based learning, Laboratory practicals, Workshops, Computer-aided learning, Tutorials, Seminars, Presentations, Attachments/Placements and the apprenticeship). Such small group teaching sessions will provide opportunities for the development of a range of skills necessary for the biomedical scientist. The research project in Semester 6 will provide opportunity for the student to conduct research and it is hoped that some students will be encouraged through this experience to embark in postgraduate training later.

04 | Who are the teaching staff?

All our academic staff (which include local and overseas trained lecturers) are full-time. In addition, experienced academicians and researchers from Malaysian Universities and research institutes, as well as consultants and biomedical scientists from private diagnostics laboratories are also invited to teach the students.



05 | What are the semester contents?

Semester 1

- Biodiversity and Utilisation of Biological Resources
- Biological Science
- General Chemistry
- Genetics
- Human Biology
- Introduction to Medical Laboratory Instrumentation
- Introduction to Professionalism and Personnel Development for Biomedical Scientists
- Organic Chemistry 1
- Statistics for Biomedical Scientists
- English
- Islamic Studies / Moral Education

Semester 2

- Biochemistry
- Biotechnology
- Cardiovascular System
- General Pathology & Introduction to Histotechnology
- General Pharmacology
- Haematology I
- Laboratory Management I
- Organic Chemistry II
- Bahasa Kebangsaan A/B

Semester 3

- Bioanalysis
- Haematology II
- Health Informatics
- Histopathology & Cytopathology I

- Management and Experimentation on Animals
- Microbiology
- Natural Products in Medicine
- Renal System
- Respiratory System

Semester 4

- Clinical Biochemistry
- Gastrointestinal System
- Genomics and Molecular Diagnostics
- Histopathology and Cytopathology II
- Immunology
- Parasitology and Entomology
- Practical Attachment I
- Pengajian Malaysia

Semester 5

- Central Nervous System
- Endocrine System
- Forensic Science and Pathology
- Laboratory Management II
- Medical Jurisprudence
- Practical Attachment II
- Radiobiology and Radiochemistry
- Reproductive System
- Selectives

Semester 6

- Current Trends in Biomedical Sciences
- Musculoskeletal System
- Research Project
- The Apprentice
- Toxicology

06 | Who will award the degree?

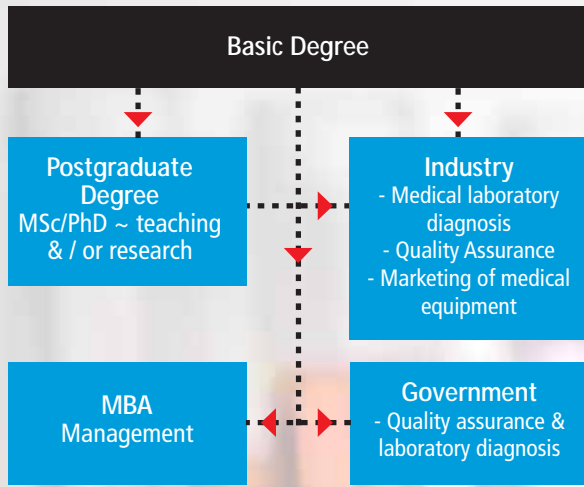
The Bachelor of Science (Hons) Biomedical Science degree is awarded by IMU. The partner universities will award their respective degrees to students who transfer to their school.

07 | How will I be assessed?

Students will be assessed through their class tests, practical reports, workshops, portfolios, projects, logbooks, written reports, presentations, dissertations and end-of-semester examinations.

Developing practical skills in techniques used in diagnostics and in related areas of research is essential for biomedical scientists

Career Paths for Biomedical Scientists in Malaysia



“The Biomedical Science programme in IMU is truly interesting and challenging. I like this course as it is suitable for me, a person who is interested in careers associated with medical sciences.”

Haw Tatt Jhong
2nd year
Biomedical Science
student



08 | Are there any industrial placements?

There will be industrial placements in Semesters 4, 5 and 6.

09 | What is the medium of instruction?

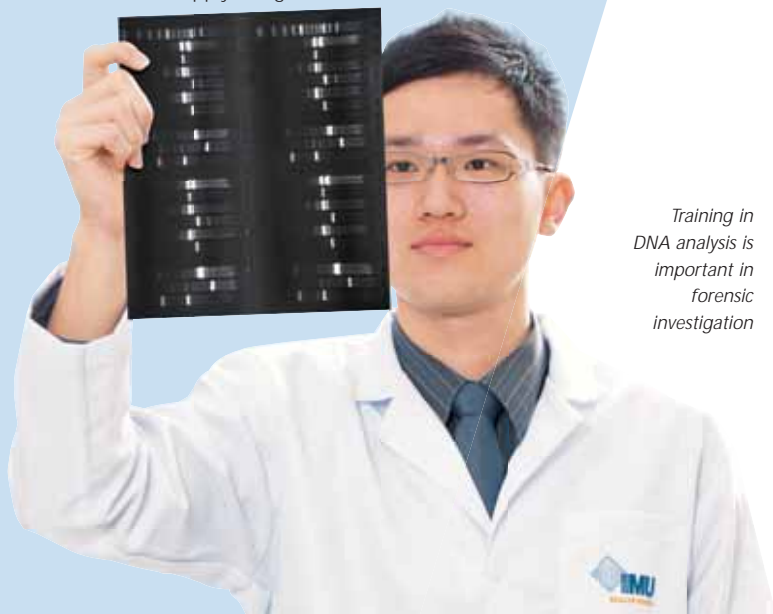
The medium of instruction is English. Students who come from a system of education in which the medium of instruction is not English are strongly recommended to improve their proficiency in English by making their own arrangements to attend additional English Language classes before entering the IMU.

10 | What sort of jobs/careers can be undertaken with this degree?

- Biomedical scientists may be employed by public and private hospital laboratories, public health laboratories and private pathology laboratories. Biomedical scientists analyse specimens of blood and body fluid, enabling diagnosis of illness and evaluation of the effectiveness of treatment. Their nature of work includes performing chemical analysis of body fluids and haematological analysis of blood samples, isolating micro-organisms and matching the blood of donors to recipient to ensure compatibility.
- Biomedical scientists may be involved in medical, veterinary and agricultural research in universities and research/health institutions. Industries employing biomedical scientists for research and development include pharmaceuticals, biotechnology, chemicals, cosmetics and toiletries. Examples of biomedical science research include research on causes and cures of diseases for example, cancer, AIDS and hepatitis, animal cloning, gene therapy as well as discovery, development and production of biopharmaceuticals, diagnostic products and chemicals.
- Biomedical science graduates can undertake postgraduate degrees in any of the related disciplines. They could also pursue a career in education. The biomedical science degree can be used as graduate entry into medicine. Biomedical science graduates can also enter the police force in the area of forensics or enter scientific journalism.

11 | When do I apply for a place in IMU?

You can apply using forecast or actual results.



Training in DNA analysis is important in forensic investigation

MINIMUM ENTRY REQUIREMENTS

All qualifications should include any two science subjects (Biology, Chemistry, Mathematics, Physics) at STPM / A-Levels / equivalent examination.

EXAMINATIONS	REQUIREMENTS
A-Levels	CCD or equivalent (2 Sciences)
STPM	CCC (2 Sciences)
Australian Matriculation	TER/UAI 75 or 65% aggregate
NCEA Level 3	60% (2 Sciences)
Canadian Grade 12/13	70% aggregate (2 Sciences)
Unified Examination Certificate (UEC)	B5 B6 B6 B6 B6 (2 Sciences)
Australian University Foundation Programmes	70% aggregate (2 Sciences)
Indian Pre-University	70% aggregate (2 Sciences)
Ministry of Education Matriculation	cGPA 2.5 (2 Sciences)
Diploma in Science	cGPA 2.5 (2 Sciences)
Diploma in Microbiology	cGPA 2.5 (2 Sciences)
International Baccalaureate (IB)	26 points (2 Sciences)
American High School Diploma with Advanced Placement (AP)	cGPA 2.0 (with AP) (2 Sciences)
Diploma in Medical Laboratory Technology	cGPA 2.5
Foundation in Biosciences	cGPA 2.5
Foundation in Engineering	cGPA 2.5
Foundation in Science	cGPA 2.5
Degree	Refer to university
Diploma	cGPA 2.5 (in a related field)

Please refer to the University for any variation on entry requirement. The IMU reserves the right to change these admission requirements from time to time.

English Language Requirement

Applicants are required to have one of these at the point of entry:

MUET	Band score of 4 (for Malaysian students only)
IELTS	Overall band score of 6.5
TOEFL	At least 550 (Paper based test) or 79-80 (Internet based test)

The Ministry of Higher Education stipulates that all students entering universities in Malaysia must sit for MUET regardless of having other English qualifications. International students are not required to sit for the MUET. All registered students are required to take the IMU Diagnostic Language Test during the first and fourth semester.

The International Medical University began in 1992 as the International Medical College, or IMC, Malaysia's first private medical college. IMC became a University in 1999, but the University has remained true to key elements of the IMC vision, which are to widen access to professional healthcare education, and to use innovative, integrated and student-centred means in providing that education.

This vision required strong links to be forged, from the outset, with reputable Partner Medical Schools committed to excellence and who share our educational philosophy. It was our progressive, systems based, integrated medical curriculum that first caught the imagination of our Partner Medical Schools, and today we collaborate with such Schools in Australasia, North America, Ireland and the United Kingdom. We have a Partner Pharmacy School in Scotland and in Australia and are establishing more partnerships in Australia.

Since 1999, the University's growth and development has been in developing clinical schools in Seremban and Batu Pahat, our own Honours degree courses in Pharmacy and Nursing, and in establishing research as a core activity, together with development of postgraduate research Masters and PhD programmes. We are already the preferred private school for medicine and pharmacy in Malaysia. Our growth has been supported by heavy investment in infrastructure development and expansion at Bukit Jalil and Seremban, and in the recruitment of staff of high calibre. In 2008, we have introduced Honours degree courses in Dentistry, Nutrition & Dietetics, Medical Biotechnology, Psychology, Biomedical Science and in Pharmaceutical Chemistry. In common with our MBBS, BPharm and BNursing, these courses have been designed from first principles by our faculty. Bachelor of Nursing Science (Hons) was introduced in 2009, a programme targeted solely for registered nurses to upgrade their qualification from diploma level to a degree level. In 2010, we introduced Chiropractic programme, the first of its kind and only complete educational programme in Malaysia as well as in all of Southeast Asia. In future, the university is planning to offer an undergraduate programme in Chinese Medicine. We believe our courses to be progressive and innovative, and we strive to use best practice in their delivery and assessment.

IMU Clinical School, Batu Pahat



IMU Clinical School, Seremban

IMU Bukit Jalil Campus





INTERNATIONAL MEDICAL UNIVERSITY
MALAYSIA

Main Campus, Kuala Lumpur

126, Jalan 19/155B, Bukit Jalil,
57000 Kuala Lumpur, Malaysia.
Tel : 603-8656 7228
Fax : 603-8656 7229

Clinical School, Seremban

Jalan Rasah, 70300 Seremban,
Negeri Sembilan Darul Khusus, Malaysia.
Tel : 606-767 7798
Fax : 606-767 7709

Clinical School, Batu Pahat

12, Jalan Indah, Taman Sri Kenangan,
83000 Batu Pahat,
Johor Darul Takzim, Malaysia.
Tel : 607-432 2787, 607-432 0580
Fax : 607-432 5575

Clinical School, Kuala Pilah

Lot No. 1743, Tingkat 1,
Bangunan Persatuan Hainan Kuala Pilah,
Jalan Wira 2/1, Taman Wira Jaya,
72000 Kuala Pilah,
Negeri Sembilan Darul Khusus, Malaysia.
Tel : 606-481 9635
Fax : 606-481 9639

enquiry@imu.edu.my
www.imu.edu.my

Programmes Available:

- Medicine
KP/JPS(A1223)10/09
- Dentistry
KPT/JPS(KA8358)12/2012
- Pharmacy
KP/JPS(KR6707)10/2010, KPT/JPS(A1746)7/2014
- Pharmaceutical Chemistry
KPT/JPS(KA8229)12/2012
- Nursing
KP/JPS(A4675)4/2014
- Nursing Science (for registered nurses)
KPT/JPS(KA9377)01/2013
- Medical Biotechnology
KPT/JPS(KA8228)8/2012
- Nutrition & Dietetics
KPT/JPS(KA8176)8/2012
- Psychology
KPT/JPS(KA8177)8/2012
- Biomedical Science
KPT/JPS(KA8230)11/2012
- Chiropractic
KPT/JPS(KA9294)7/2014
- Postgraduate (MSc & PhD by research)
KP/JPS(A1468)12/2010, KP/JPS(KN3767)5/2010

All enquiries regarding student admissions
should be directed to:

Department of
Student Services and Marketing

INTERNATIONAL MEDICAL UNIVERSITY

126, Jalan 19/155B, Bukit Jalil,
57000 Kuala Lumpur, Malaysia.
Tel : 603-2731 7272
Fax : 603-8656 1018

KP/JPS/5195/US/2, KP(JPS)/DFT/US/W03

Obtain latest information on the IMU
programmes (including tuition fees),
submit an online application or download
application forms via **www.imu.edu.my**



Cert No : KLR 0500119

The IMU has been certified with MS ISO 9001:2000
for the provision of tertiary education in medicine,
pharmacy and health sciences.

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given in this brochure but it is subject to alteration without notice.
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Please consult the Department of Student Services and Marketing
for the most up-to-date information.

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