MOLECULAR MEDICINE
(MSc)

SCHOOL OF POSTGRADUATE STUDIES

2019
**Overview**

Molecular medicine is a major focused area of contemporary medical research, and had facilitated recent breakthrough in disease diagnosis, management and treatments. For instance, it is now possible to elucidate multiple metabolites and toxins derived from drug based on interomics approaches, design highly specific and individualised treatments through genomics screening, bioinformatics and chemoinformatics assessment and enhance bioavailability of new drugs by making use of nano-delivery.

The MSc in Molecular Medicine is designed for science and medical graduates seeking advanced training in molecular and disease-oriented research. This programme aims to deliver an exceptional curriculum to equip students with skills that meet the highest demands and expectations of scientific rigour. The curriculum is innovative and draws on the expertise of our world-renowned faculty who are also passionate researchers. Core modules present the latest scientific developments in molecular medicine that are delivered through innovative andragogy. Students will appreciate the role of simple and complex molecules in human diseases and the ways in which systems biology, computational biology and chemical genetics have transformed research strategies and methodology in stem cell technology and therapeutics, drug design and development as well as medical and clinical research.

Upon completion, career paths available include research scientists in academia, research institutes or industries worldwide. Graduates may also continue their education as PhD students at IMU or elsewhere.

---

**What Is IMU’s Molecular Medicine Programme About?**

<table>
<thead>
<tr>
<th>DEGREE / DURATION</th>
<th>COMMENCEMENT</th>
<th>DELIVERY MODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSc in Molecular Medicine — 1½ – 4 years</td>
<td>March and September</td>
<td>Conventional Open and Distance Learning</td>
</tr>
</tbody>
</table>
“The IMU MSc Molecular Medicine is recommended for science and medical graduates who are interested in molecular and disease-oriented research. It prepares students for career opportunities in medically focused biopharmaceutical and biotechnology industries; and equip students with enhanced skills to carry out research at a higher degree in specific fields. The combination of coursework and research project offers a well-grounded, theoretically-informed as well as research-intensive learning programme for a comprehensive understanding in the field.”

DR HO KET LI — Lecturer & Programme Director
PhD (Biotherapeutic), Bachelor of Science (Biotechnology)
How Does the Programme Work?

Molecular Medicine Programme Structure

The IMU MSc Molecular Medicine programme consists of 2 semesters of coursework followed by a research project in the third semester. New semesters commence in March and September each year.

Students are given options to conduct the programme under “Conventional” or “Open and Distance Learning” mode. For the former, all coursework classes are conducted on weekends while some activities will be conducted online. For the latter (ODL) however, all classes will be carried out using IMU online teaching and learning platform. Students that undertake the research project in the final semester will require to commit full time either at IMU or approved research institutes, and hospitals. The minimum completion duration for the programme is 18 months while maximum duration is 4 years. A student must complete a minimum of 40 credits (15 credits from core coursework modules, 5 from selective coursework modules and 20 from research project) to graduate.

Teaching and learning activities comprise both conventional and online learning approaches that integrated into lectures, case studies, workshops, seminars, presentations, assignments, discussions and tutorials. There are no laboratory practical in each coursework module, except in the research project.

Core modules are as follows:
- Molecular Medicine (3 credit)
- Immunology and Infection (2 credit)
- Molecular Basis of Diseases 1 (3 credit)
- Molecular Basis of Diseases 2 (4 credit)
- Research Methodology and Scientific Writing (3 credit)
- Research Project (20 credit)

Selective modules are as follows:
- Bench to Market (2 credit)
- Bioinformatics (3 credit)
- Laboratory Management (2 credit)
- Stem Cell Technology and Therapeutics (3 credit)
- Quality Management and Regulatory Systems (2 credit)
- Computational Drug Discovery Techniques (4 credit)
- Principles of Drug Discovery (4 credits)

The curriculum is reviewed periodically and is subject to change.

Assessment

In course assessment throughout the programme is conducted via written reports (case study report, critical reviews, assignments, CAL reports, scientific writing and etc) and oral presentations. For Research Project Module, students are expected to defend the project in Viva Voce and to produce a research dissertation. There are no end-of-semester examinations for all modules.

Entry Requirements

A Bachelor Degree in related discipline with a minimum cGPA of 2.75 or equivalent, as accepted by the University’s Senate; or

A Bachelor Degree in related discipline with a minimum cGPA of 2.50 but not meeting cGPA of 2.75, can be accepted subject to rigorous internal assessment; or

A Bachelor Degree in related discipline not meeting cGPA of 2.50, can be accepted subject to a minimum of 5 years working experience in relevant field.

English Language Requirements

For International Students

1) IELTS : Band score 5.0; or
2) TOEFL (PBT) : Overall score of 410-413; or
3) TOEFL (iBT) : Overall score of 34; or
4) Cambridge English : Advanced (CAE) : Overall score of 160; or
5) Cambridge English : Proficiency (CPE) : Overall score of 180; or
6) Pearson Test of English (PTE) : Overall score of 36
Top: Students will be benefited from the extensive network of credible and experience researchers from IMU partner university. A/Prof Stuart Clarke from University of Southampton who is the Adjunct Associate Professor at IMU.

Left: IMU provides a conducive research environment to cater for various research projects addressing current challenges in the field of Molecular Medicine.

Bottom: Problem based and challenge based learning will formed an integral part of the curriculum.
Why Study Molecular Medicine at IMU?

1. An Established Private Healthcare University

IMU is Malaysia’s first and most established private medical and healthcare university with over 27 years of dedicated focus in healthcare education. IMU achieved the SETARA-2017 Tier 6 status (Outstanding) under the Mature University category.

2. Renowned and Highly Experience Faculty

Students will be taught and supervised by staff who are experts in their field with well-established reputations nationally and internationally. The academic community of IMU pursues and achieves excellence in a wide range of research activities. Many of them present their findings in international conferences to keep up to date with the latest development in specialised areas. They also publish their findings in international peer-reviewed journals.

3. Flexible Learning Options

The programme adopts a credit-based modular curriculum structure that allow students to choose the number of modules to register each semester. In addition, the programme is offered in both conventional and ODL mode. Students could take up to four years to complete the entire programme, enabling full-time working adults the options to plan and fit their studies around their work, family and other commitments.

4. Innovative Curriculum

The curriculum of this programme is innovative, carefully planned and aligned to meet the demands and expectations of Molecular Medicine. This would offer great career advancement as a research scientist in academia, research institutes, clinical setting or industries worldwide. It would also pave the way pave the way for PhD study at IMU or elsewhere.

5. Research Partnerships

Students will benefit from the University’s research collaborations with various partner universities, as well as foreign and locals research institutions in areas such as cancer, bioactive molecules, nutrition, environmental health, stem cells etc.
How Much Does It Cost?

Molecular Medicine Programme Fees
All fees quoted are in Ringgit Malaysia unless stated otherwise.
All IMU alumni who are self-funding their postgraduate studies and meet the eligibility criteria will be eligible for a 25% bursary.

**Fees Overview**

<table>
<thead>
<tr>
<th>Fee</th>
<th>Amount (RM)</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Malaysian Student</td>
<td>International Student</td>
<td></td>
</tr>
<tr>
<td>Application Fee</td>
<td>150</td>
<td>500</td>
<td></td>
</tr>
<tr>
<td>Registration Fee</td>
<td>1,100</td>
<td>3,400</td>
<td></td>
</tr>
<tr>
<td>Refundable Caution Deposit</td>
<td>2,000</td>
<td>2,000</td>
<td></td>
</tr>
<tr>
<td>Student Association Fee per Semester</td>
<td>40</td>
<td>40</td>
<td></td>
</tr>
</tbody>
</table>

• Application fee is payable upon submission of application.
• Registration fee and refundable caution deposit are payable upon acceptance of the offer letter issued by the IMU Admissions Office.

<table>
<thead>
<tr>
<th>Fee</th>
<th>Total (RM)</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Malaysian Student</td>
<td>International Student</td>
<td></td>
</tr>
<tr>
<td>Fees (Conventional Mode)</td>
<td>40,000</td>
<td>53,650</td>
<td></td>
</tr>
<tr>
<td>Fees (ODL)</td>
<td>32,000</td>
<td>32,000</td>
<td></td>
</tr>
</tbody>
</table>

Students for the 2019 intakes are eligible for a RM5,000 bursary.
Programmes at IMU

Pre-University

Foundation in Science
KPT/JPT(R/010/3/0186)09/2023
MQA/FA3974

Undergraduate

Medicine
KPT/JPT(R/2/721/6/0033)09/2026
MQA/A6155

Psychology
KPT/JPT(R/2/311/6/0013)09/2022
MQA/A8177

Dentistry
KPT/JPT(R/2/724/6/0010)01/2023
MQA/A7026

Pharmacy
KPT/JPT(R/2/727/6/0050)09/2026
MQA/A8374

Pharmaceutical Chemistry
KPT/JPT(R/2/442/6/0003)01/2023
MQA/A8229

Dietetics with Nutrition
KPT/JPT(R/2/726/6/0021)09/2022
MQA/A8176

Nutrition
KPT/JPT(R/2/726/6/0011)06/2022
MQA/A1298

Biomedical Science
KPT/JPT(R/2/421/6/0011)09/2022
MQA/A8230

Medical Biotechnology
KPT/JPT(R/2/545/6/0014)09/2022
MQA/A8228

Chiropractic
KPT/JPT(R/2/726/6/0054)08/2026
MQA/A9294

Chinese Medicine
KPT/JPT(R/2/721/6/0059)01/2027
MQA/A10260

Nursing
KPT/JPT(R/2/723/6/0125)04/2027
MQA/A8944

Nursing Science (for registered nurses)
KPT/JPT(R/2/723/6/0101)01/2024
MQA/FA2679

Postgraduate

Acupuncture (MSc)
KPT/JPT(N/721/7/0071)03/2022
MQA/PAB570

Analytical & Pharmaceutical Chemistry (MSc)
KPT/JPT(R-CDL/442/7/0001)01/2022
MQA/FA1191

Business Administration in Healthcare Management (Postgraduate Certificate/Postgraduate Diploma/Master)
KPT/JPT(N/345/7/1082)09/2023
MQA/PSA11354
KPT/JPT(N/345/7/1090)12/2023
MQA/PSA11355
KPT/JPT(N/345/7/1085)10/2023
MQA/PSA11353

Diabetes Management & Education (Postgraduate Diploma)
KPT/JPT(N/726/7/0030)02/2023
MQA/PA39086

Health Professions Education (HPE) (Postgraduate Certificate/Postgraduate Diploma/Master)
KPM/JPT(N/145/7/0064)09/2020
MQA/SWA05162
KPM/JPT(N/145/7/0066)09/2020
MQA/PSA5163
KPM/JPT(N/145/7/0070)09/2020
MQA/PA5164

Implant Dentistry (Postgraduate Diploma)
KPT/JPT(N/724/7/0019)06/2021
MQA/SWA1111

Molecular Medicine (MSc)
KPT/JPT(R/545/7/0078)07/2022
MQA/A1299

Pharmacy Practice (Master)
KPT/JPT(R/2/727/7/0051)03/2024
MQA/SWA02796

Public Health (MSc)
KPT/JPT(R/720/7/0077)09/2020
MQA/A10261

Medical & Health Sciences (MSc & PhD by Research)
KPT/JPT(R/2/720/7/0049)06/2026
MQA/A10618
KPT/JPT(R/2/721/8/0043)01/2027
MQA/A3767

Every effort has been made to ensure the accuracy of the information given in this brochure but it is subject to alteration without notice.

The University reserves the right to alter or delete any of the information included at any time and it shall not be bound by any errors or omissions and cannot accept liability in respect thereof.

Please visit www.imu.edu.my for the most up-to-date information.

Published by the Marketing Department, IMU. 001/2019/06/v2

The IMU has been certified with ISO 9001: 2015 for the provision of Pre-University, Undergraduate and Postgraduate Programmes for the Medical and Healthcare Professions.