ANALYTICAL & PHARMACEUTICAL CHEMISTRY (MSc)

SCHOOL OF POSTGRADUATE STUDIES

2019
What Is IMU’s Analytical & Pharmaceutical Chemistry Programme About?

Overview

The IMU’s Masters of Science in Analytical and Pharmaceutical programme provides graduates with an opportunity to enhance their knowledge and work-ready skills for a career in industry or academia. For students who wish to progress to PhD research, the programme will provide an excellent foundation and pathway for this next level of study.

The Master’s programme is also geared to those who want to advance their careers in chemical or pharmaceutical industries and those entering the field from related areas. The modular programme is designed to fit in with full-time employment to help students balance their work commitments with learning.

In the practical and workshop sessions, students will develop a range of transferable technical skills. Practical sessions in the programme includes hands-on high performance liquid chromatography (HPLC) operation, chromatography, spectrometry and spectroscopy techniques and computer-aided drug discovery tools that are used in the industry as well as academia research.

One of the modules, ‘Quality Management and Regulatory Systems’ will equip graduates with the tools and knowledge needed to progress as a regulatory professional and stay ahead of the competition.

Students will undertake an in-dept individual research project under expert guidance in which students will acquire specialist skills.

<table>
<thead>
<tr>
<th>DEGREE / DURATION</th>
<th>COMMENCEMENT</th>
<th>MODE OF DELIVERY</th>
</tr>
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<tbody>
<tr>
<td>MSc in Analytical and Pharmaceutical Chemistry — 1½ – 6 years</td>
<td>March and September</td>
<td>Conventional or Open Distance Learning (ODL)</td>
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* This programme is accredited by the Royal Society of Chemistry, UK.
A Word from the Programme Director

“The Masters programme builds on your undergraduate chemistry experience and provides specialised knowledge and practical experience in a wide range of modern analytical techniques. The programme also develops advanced knowledge and skills in pharmaceutical chemistry focusing on various aspects of drug discovery, design and development. Since the programme has a unique blend of both analytical and pharmaceutical chemistry disciplines, you will have good opportunities for career progression and job prospects in a range of industries.”

DR WONG LAI CHUN — Senior Lecturer & Programme Director
PhD (UK), CChem, MRSC
How Does the Programme Work?

Analytical & Pharmaceutical Chemistry Programme Structure

The programme consists of three semesters and is a combination of course work (21 credits) and research (22 credits). New semesters commence in March and September each year and each semester comprises 20 weeks.

Teaching and learning methods are in line with objectives of programme modules. They include lectures, tutorials, laboratory sessions, workshops, case studies, critical reviews and seminars. Face-to-face teaching and learning activities are conducted on weekends for convenience of students who have personal or work commitments on weekdays.

The Course Modules include:

• Modern Analytical Techniques for Qualitative Analysis (4 Credits)
• Modern Analytical Techniques for Quantitative Analysis (4 Credits)
• Principles of Drug Discovery (4 Credits)
• Computational Drug Discovery Techniques (4 Credits)
• Quality Management and Regulatory Systems (2 Credits)
• Research Methodology and Scientific Writing (3 Credits)
• Research Project I (4 Credits)
• Research Project II (18 Credits)

The curriculum is reviewed periodically and is subject to change.

Assessment

Students’ progress is evaluated based on continuous assessment via project work, critical reviews, practical reports, assignments and oral presentations. Research dissertation will be assessed at the end of Semester 3.

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

Mode of delivery

Conventional

Teaching is conducted in a blended learning approach whereby students learn via online and face-to-face teaching. Students may conduct their research in campus or at their workplace.

Online and distance learning (ODL)

Teaching is conducted via online to provide flexibility and accessibility. Students are only required to be in campus for practicals, computer aided learning sessions and selected workshops. Students may conduct their research in campus or at their workplace.

Practical Hours In The Programme

<table>
<thead>
<tr>
<th>Analytical Techniques</th>
<th>Hours</th>
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<tbody>
<tr>
<td>Computer Aided Drug Discovery</td>
<td>65</td>
</tr>
<tr>
<td>Spectroscopy and Spectrometry</td>
<td>11</td>
</tr>
<tr>
<td>Chromatography</td>
<td>8</td>
</tr>
<tr>
<td>HPLC</td>
<td>46</td>
</tr>
</tbody>
</table>
This modular programme is designed for students of all ages and backgrounds, who want to balance work commitments with learning.

Hands-on workshops and laboratory-based practical sessions offer the unique opportunity to engage in an interactive learning environment.

The integral research project provides you with substantial experience of working independently and communicating your research effectively and efficiently through dissertation and publication.
Why Study Analytical & Pharmaceutical Chemistry 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 Experienced 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 research 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. Curriculum Benchmarked to International Standards
   IMU’s Analytical & Pharmaceutical Chemistry curriculum has been developed to meet high international standards and stringent Malaysian Qualifications Agency (MQA) standards. The interactive and engaging curriculum delivery style enables the students to be focused, creating a conducive environment for experiential and lifelong learning.

   The research module and student centered learning delivery methods throughout the programme enhances the students analytical, critical thinking and problem solving skills, promotes their professional development and prepares them for the current challenging work environment.

5. Research Partnerships
   Students will benefit from IMU’s national and international research collaborations with renowned institutions in areas such as drug discovery, design and development, natural products, drug synthesis, pharmaceutical and biomedical analysis.
How Much Does It Cost?

Analytical & Pharmaceutical Chemistry 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

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<tr>
<th>Fee</th>
<th>Amount (RM)</th>
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<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>
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<tr>
<td>Tuition Fee</td>
<td>43,000</td>
<td>57,500</td>
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- 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.

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<tbody>
<tr>
<td></td>
<td>Malaysian Student</td>
<td>International Student</td>
<td></td>
</tr>
<tr>
<td>Fees (Conventional Mode)</td>
<td>43,000</td>
<td>57,500</td>
<td></td>
</tr>
<tr>
<td>Fees (ODL)</td>
<td>34,400</td>
<td>34,400</td>
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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/FA1298

**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/FA8944

**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/PA8570

**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

**Dentistry**  
KPT/JPT(R/724/6/0019)06/2021  
MQA/SWA6111

**Diabetes Management & Education (Postgraduate Diploma)**  
KPT/JPT(N/726/7/0030)02/2023  
MQA/PA9086

**Health Professions Education (HPE) (Postgraduate Certificate/Postgraduate Diploma/Master)**  
KPM/JPT(N/145/7/0066)09/2020  
MQA/SWA05162  
KPM/JPT(N/145/7/0066)09/2020  
MQA/PSA5163  
KPM/JPT(N/145/7/0070)09/2020  
MQA/PA/5164

**Implant Dentistry (Postgraduate Diploma)**  
KPT/JPT(N/724/7/0019)06/2021  
MQA/SWA05162

**Molecular Medicine (MSc)**  
KPT/JPT(R/545/7/0078)07/2022  
MQA/FA1299

**Pharmacy Practice (Master)**  
KPT/JPT(R/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/2/720/7/0040)06/2026  
MQA/A10618  
KPT/JPT(R/2/721/8/0043)01/2027  
MQA/A3767

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