

ALUMNI

Even though I come from a non-mathematics academic background, it didn't stop me from pursuing further studies in this program. Working as a credit officer in the banking industry, this program has helped me to sharpen my critical thinking and analytical skill while performing credit assessments.

NURUL SYIFAA BINTI MOHAMMAD RADZI, Senior Executive, Relationship Management, SME Bank, Malaysia

The lectures were always engaging and informative, and the course program was well-structured and comprehensive. I am also thankful for the opportunity to apply my knowledge in a practical setting, which has been invaluable in my professional development

KHAIRUNISA BINTI ABDUL RAZAK, Accountant, Majlis Perbandaran Segamat, Johor, Malaysia

I am a full-time oil and gas employee with five kids. Juggling work, studies, and family was not easy. I'm lucky that I made the right decision to enroll in this program. UMP lecturers are very friendly, resourceful and helpful. Kudos to my lovely lecturers & UMP!

FAIRUZ FADYLAH BINTI MOHAMAD SHAFFIE, Senior Chemist, Petronas Chemicals Ammonia, Kerteh, Terengganu, Malaysia

Syllabus is up to date, the program is very well structured, and the lecturers are highly competent in their respective field.

Ts. SYAHRIZAL BIN SALLEH, Chief Technology Officer, Cuatro AI Solution Sdn. Bhd., Malaysia

The course was interesting and challenging at the same time. It suited my profession and has proven to be applicable to my day-to-day job as a chemical engineer

MUHAMMAD AIMAN HUZIR BIN ROSLI, Water Specialist, BASF PETRONAS Chemicals Sdn. Bhd., Malaysia

Why Should Enrol In This Programme?

Caters two pillars of Industrial Revolution 4.0 (IR4.0) – Big Data Computing & Simulations. Integration of knowledge with programming skills : Python, R Language, MATLAB, Minitab, Excel VBA, KNIME, TORA.

No final exams!
Flexible timetable for busy professionals.
Hybrid classes (online and face-to-face learning).
Designed for both mathematicians and non-mathematicians.

Industrial case studies are embedded in all courses. Professional development for career enhancement towards the digitalisation world.



Contact Us

Email Faculty : postgraduate.psm@umpsa.edu.my, azlyna@umpsa.edu.my
Phone No Faculty : +6094315049 or +60186652058

Email IPS : ips.admission@umpsa.edu.my
Phone No IPS : +6094315024

MASTER OF SCIENCE INDUSTRIAL MATHEMATICS

MQA/FA 9029

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<https://ips.umpsa.edu.my>



About UMP

Established as a technical university in 2002, Universiti Malaysia Pahang (UMP) offers a variety of engineering-and technology-based technical programmes, including high-level Technical and Vocational Education and Training (TVET).

Ranked as one of the best in Research and Innovation within the classifications of Malaysia Technical University Network (MTUN) and Non-Research University (Non RU), UMP is steadfastly committed to innovating and developing unique academic programmes through strategic international collaborations. A milestone of such innovation is UMP's world class dual-degree engineering programme offered in collaboration with Germany's Karlsruhe University of Applied Sciences (HsKA) – now seen as the benchmark for other public institutions of higher learning in Malaysia. In the field of research, UMP collaborates with local industries to focus on industry-related applications. Such research collaboration enriches the teaching and learning modules at the university, while simultaneously promotes commercialization of research output and products.

Overview

Master of Science (Industrial Mathematics) is designed to provide in-depth coverage of topics in industrial and applied mathematics, with two sub-specialisations: (i) Data Computing, and (ii) Computational Mathematics. The programme caters to two pillars of Industrial Revolution 4.0 (IR 4.0), including simulation and big data computing.

The program emphasizes embedded case studies in all courses, enabling students to integrate theory and application and use mathematical software such as Python, R Language, VBA, EXCEL, Matlab, TORA, Minitab and KNIME as vital computational tools. The program also requires every student to complete a project dissertation based on a chosen applied and industrial problems.

The programme caters to fresh graduates and professionals, especially the non-mathematics degrees holders, who aspire to enhance their knowledge and

competency in one of the sub-specialisations offered. Applicants who possess a first degree in any of the following specializations; Statistics, Mathematics, Finance, Economy, Computing, Engineering and Sciences as well as good mastery in undergraduate mathematics courses are welcomed to apply.

Career Path

- Academician
- Acoustic Consultant
- Algorithms Engineer
- Business Analyst
- Data Analyst
- Data Engineer
- Data Scientist
- Inventory Control Specialist
- Machine Learning Engineer
- Mathematical Modeller
- Meteorologist
- Operational Researcher
- Programmer Analyst
- Quantitative Financial Analyst

Program Structure

Credit Hours
42
hours

Durations:

- 1.5 years (Full-Time) (Max. 3 Years)
- 2 years (Part-Time) (Max. 4 Years)

Course Structure

| Semester 1 | Semester 2 | Semester 3 |
|-----------------------------------|----------------|-----------------|
| Research Methodology | Elective I | Dissertation II |
| Computational Methods in Industry | Elective II | |
| Industrial Statistics | Dissertation I | |
| Programming & Simulation | | |



Application

The application is open throughout the year for February and September intake. Applicants may apply through the UMP postgraduate website <https://ips.ump.edu.my/index.php/en/admission/application/application-online> using the online application form available on the website. Upon filling out the application form, applicants must submit copies of the relevant documents. All applicants should include a processing fee of RM50 for Malaysian OR USD 30 for international applicants.

Course Fee

Estimated total fees

| | |
|---|-------------------|
| Local Student (MYR 285/ Credit Hour) | MYR 15,205 |
| International Student (MYR 475/ Credit Hour) | MYR 26,375 |

*MYR-Ringgit Malaysia
*Hostel/ Accommodation fees are not included

Location

Centre for Mathematical Sciences,
Universiti Malaysia Pahang,
Lebuhraya Persiaran Tun Khalil Yaacob,
26300 Gambang, Pahang, Malaysia



Entry Requirement

A Bachelor's Degree (Honours) with
CGPA ≥ 2.75 OR
 $2.50 \leq \text{CGPA} < 2.75$ is acceptable
subject to comprehensive internal
assessment, OR
 $2.00 \leq \text{CGPA} < 2.50$ is acceptable
subject to 5 years working experience in
relevant field and subject to
comprehensive internal assessment

For non-Mathematics Bachelor's degree holders, candidate needs to take a prerequisite course set by the faculty. If student candidates who are not in the field have attended the relevant prerequisite course through micro-credentials, proof of the results of the course can be submitted when applying for the programme online.

Alternative Admission Requirements

Looking for a way to pursue a Master of Science (Industrial Mathematics) but don't have the right qualifications? Accreditation of Prior Experiential Learning for Access (APELA) offers an alternative pathway for individuals with work experience to access higher education.

Eligibility is open to Malaysian or expatriate individuals and their families who are at least 30 years old and possess relevant work experience, as well as hold STPM/Diploma/equivalent. Don't let a lack of formal qualifications stop you from pursuing your dreams. Take advantage of APELA and unlock your potential today.

International Student

| Minimum English Requirements | Band/ Points |
|---------------------------------|--------------|
| MUET | Band 3.0 |
| IELTS | Band 5.0 |
| TOEFL Internet Based Test (IBT) | 60 |

The certification should not be more than **2 years**.

