

MASTER OF SCIENCE IN MATHEMATICS AND **APPLIED MATHEMATICS**

KPT/JPS [N/461/7/0031] 03/25 [MQA/FA12013]

DURATION OF STUDY

INTAKE

MEDIUM OF INSTRUCTION

ANNUAL FEE*

Full-time: minimum 2 years Part-time: minimum 3 years

April / September

English

(Local)

RM 12,000 RM 13,200 (International)

* Scholarships and allowances available, subject to fulfilment of requirements

ABOUT THE PROGRAMME

The Mathematics and Applied Mathematics programme at Xiamen University (XMU), offered by the School of Mathematical Sciences (SMS), was introduced in 1923, among the first batch of programmes of XMU. The renowned mathematician, Chen Jingrun, once studied in this programme from 1949 until 1953. In the "2018 Best Universities for Mathematics" published by US News and World Report, XMU was ranked 81st globally, and 10th among the universities in China.

The discipline of mathematics of XMU has been ranked among the top 0.5% globally in Essential Science Indicators (ESI) since 2018, and the ranking has been improving every year. Currently SMS has 86 full-time faculty members. From 2015 to 2019, SMS has secured more than 120 research grants from the National Natural Science Foundation et al, amounting to RMB 55 million. Around 150 SCI journal papers were published by the School faculty every year. SMS also publishes the Journal of Mathematical Study, and jointly publishes the SCIE journal, East Asian Journal of Applied Mathematics, with Global Science Press. Benefiting from the cooperation with various universities around the world, it hosts more than 100 mathematicians to XMU annually. In 2019, TianYuan Mathematical Center in Southeast China was established in Xiamen University.

The Master Programme in Mathematics and Applied Mathematics in Xiamen University Malaysia is established with two main missions. One is to provide rigorous training to those talented mathematics students to equip them with enough tools and skills to pursue a PhD degree in Mathematics or Applied Mathematics. The other one is to provide advanced training in mathematics to scientists and engineers who want to work in highly technical areas that require indepth mathematical knowledge, such as artificial intelligence, financial engineering, etc.

PROGRAMME HIGHLIGHTS

- A comprehensive programme encompassing pure and applied mathematics, with flexibility in choosing the area of specialty
- An excellent team of faculty members from renowned universities from all over the world
- A distinctive educational approach encouraging applications of knowledge to enhance understanding
- Good access to excellent educational resources of XMU
- Tight interaction and collaboration with the School of Mathematical Sciences in XMU
- A seamless pathway to doctorate program in mathematics at XMUM or other well-known institutions in the world

CAREER OPPORTUNITIES

- Lecturer or Teacher
- Data Analyst
- Programmer
- Al (Artificial Intelligence) Engineer
- Financial Analyst
- Actuary
- Bank Manager



ENTRY REQUIREMENTS

- A bachelor's degree in Mathematical Sciences with a minimum CGPA of 2.50 or the equivalent; or
- A bachelor's degree or equivalent with a CGPA below 2.50, can be accepted subject to a minimum of 5 years' working experience in a relevant field; or
- A bachelor's degree in Engineering or Other Sciences with a minimum CGPA of 2.75, with at least grade B (Grade Point 3.00) in Calculus I (Single Variable Calculus), Calculus II (Multivariable Calculus) and Linear Algebra; or
- A student who does not meet any of the requirements above, but who has had a bachelor's degree with a minimum CGPA of 2.75 (in any field), can sit for the examination of Calculus I, Calculus II and Linear Algebra conducted by Xiamen University Malaysia. A student that passes all these three subjects with a grade B (Grade Point 3.00) or above can be admitted into the programme.
- English proficiency for international students: IELTS 5.0/MUET Band 3.5

LIST OF COURSES OFFERED

| | Chinese 1* | Selected Topics on China | *ADDITIONAL REQUIREMENT |
|--------|-----------------------------------------|-----------------------------------------------------|----------------------------------|
| YEAR 1 | Research Methodology | | MAJOR CORE |
| | Real Analysis | Differentiable Manifolds | |
| | Advanced Linear Algebra | Analytic Number Theory | MAJOR ELECTIVE (8 courses) |
| | Dynamical Systems | Algebraic Number Theory | |
| | Graduate Algebra | Differential Geometry | |
| | Graduate Complex Analysis | Fourier Analysis | |
| | General Topology | Mathematical Statistics | |
| | Algebraic Topology | Advanced Numerical Analysis | |
| | Functional Analysis | Applied Numerical Linear Algebra | |
| | Graduate Partial Differential Equations | Numerical Methods of Partial Differential Equations | |
| | Advanced Probability Theory | Optimization | |
| | Stochastic Processes | Stochastic Calculus | |
| | Regression Analysis | Advanced Financial Mathematics | |
| | Time Series | Graph Theory | |
| | Combinatorics | | |
| YEAR 2 | Master Dissertation | | MAJOR CORE |

^{*}Students with credits in Chinese courses in previous result slips (UPSR/STPM/UEC/A-Level/Foundation/Matriculation/Diploma/SPM/O-Level/HSK, etc.) can be exempted from Chinese 1.

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