



USM
UNIVERSITI SAINS MALAYSIA



MATH
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<http://math.usm.my>



UNIVERSITI SAINS MALAYSIA

POSTGRADUATE DEGREE PROGRAMMES

SCHOOL OF MATHEMATICAL SCIENCES

<http://math.usm.my>

Background

The School of Mathematical Sciences, USM, was established in 1974. The school currently has more than 45 lecturers, grouped into 3 main departments, namely Pure Mathematics, Applied Mathematics and Statistics/Operations Research.

As for postgraduate programmes, the school offers the Doctor of Philosophy (Ph.D) and Master of Science (M.Sc) by research, M.Sc (Statistics) and M.Sc (Mathematics) via mixed mode, and M.Sc (Teaching of Mathematics) via coursework.

The school also actively organizes numerous short courses, such as time series econometrics, statistical data analysis, statistical quality control and linear regression to industrial practitioners, college and university lecturers, and postgraduate students.

The school offers workstations for research candidates at the Postgraduate Research Room. Students can also enjoy facilities such as the conducive study areas and computer laboratories.

The School of Mathematical Sciences is conveniently located near eateries, recreational areas, shops, the USM mosque and public bus stops.



Our Programmes

Research Mode

- **Doctor of Philosophy**
- **Master of Science**

Mixed-mode

- **Master of Science (Mathematics)**
- **Master of Science (Statistics)**

Coursework Mode

- **Master of Science (Teaching of Mathematics)**

Application for Research, Mixed Mode and Coursework is open year-around. All applications must be submitted via www.admissions.usm.my



Doctor of Philosophy (Ph.D) & Master of Science (M.Sc)

Research Mode

Description

The School of Mathematical Sciences offers Doctor of Philosophy (Ph.D) and Master of Science (M.Sc) programmes in full research mode. Students have the opportunity to pursue research projects in various fields according to the expertise of the academics in the School of Mathematical Sciences.

	Full Time	Part Time
PhD	Min 24 months - Max 60 months	Min 36 months - Max 90 months
MSc	Min 12 months - Max 36 months	Min 24 months - Max 72 months



- Full time or part time modes available
- Fast-track PhD is offered for 1st class BSc graduates
- All students must undertake a research methodology course
- International students must undertake the first level Bahasa Melayu course

Master of Science (Mathematics)

Mixed Mode

Description

The programme aims to produce experts in the field of Computational and Applied Mathematics who are able to undertake research and development activities in addition to teaching of Computational and Applied Mathematics at the postgraduate level.



- Specially designed curriculum to strengthen understanding and skills in Applied Mathematics.
- Study full time for one year or part time for two years.
- Build a strong research foundation through dissertation.

Structure

- MAT514/4 Mathematical Modelling
- MAT515/4 Computational Mathematics
- MAT516/4 Curve and Surface for CAGD
- MAT517/4 Computational Linear Algebra
- MAT518/4 Numerical Methods For Differential Equation
- MAT510/20 Dissertation

This one year program allows you to prepare yourself before undertaking a PhD or working in academia or the industry.



Master of Science (Statistics)

Mixed Mode

Description

The programme aims to produce experts in the field of statistics who are able to undertake research and development activities in addition to the teaching of statistics at the postgraduate level.



- Specially designed curriculum to strengthen understanding and skills in Statistics.
- Study full time for one year or part time for two years.
- Build a strong research foundation through dissertation.

Structure

- MST561/4 Statistical Inference
- MST562/4 Stochastic Processes
- MST564/4 Statistical Realibility
- MST565/4 Linear Models
- MST567/4 Categorical Data Analysis
- MST566/20 Dissertation

The statistics courses will aid you for working in the industry. You will also will be well prepared for furthering your research.

Master of Science (Teaching of Mathematics)

Coursework Mode

Description

The programme aims to increase teachers' expertise in teaching mathematics courses at pre-university level and to nurture research activities among teachers.



- Specially designed curriculum for educators.
- Mathematical content-based courses.
- Study full time or part time.
- Offered at both USM main campus and USM Sains@KL.

Structure

Compulsory Courses

- MGM502/4 Number Theory
- MGM511/4 Linear Algebra
- MGM531/4 Euclidean Geometry
- MGM551/4 Operations Research
- MGM561/4 Statistical Methods for Research
- MGM562/4 Probability Theory
- MGM599/8 Project

Elective courses (Choose 3 courses)

- MGM501/4 Analysis
- MGM503/4 Combinatorics
- MGM563/4 Statistical Inference
- MGM581/4 Mathematics and Technology
- PMC561/3 Theories of Teaching and Learning Mathematics



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