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Admission Number

Master of Science Programme in Applied Mathematics (International Programme)

หลักสูตร วิทยาศาสตรมหาบัณฑิต สาขาวิชา คณิตศาสตร์ประยุกต์ (หลักสูตรนานาชาติ) (ภาคปกติ)

Faculty of Science Department of Mathematics

คณะวิทยาศาสตร์ ภาควิชา คณิตศาสตร์

Expected number of students to be accepted all year round : 15 Students

Admission Requirements

A candidate must:

1. have a Bachelor of Science, Bachelor of Engineering, or an equivalent degree, or other degrees with at least 15 mathematics subjects;
2. have a grade point average of at least 2.50;
3. Submit a certificate of English proficiency with minimum admission score:
   - IELTS - at least 3 or
   - TOEFL INTERNET BASED - at least 32 or
   - TOEFL ITP (test arranged by Faculty of Graduate Study, Mahidol University) - at least 400 or
   - MU GRAD TEST (Computer based) - at least 36

   Important Notes:
   - English proficiency score must be taken within 2 years up to the admission date.
   - Application without submitting a valid English certificate will NOT be considered.
   - MU English Competence Standards: www.grad.mahidol.ac.th
   - MU English proficiency tests, please contact the Language Center, Faculty of Graduate Studies. Tel. 0-2441-4125 ext. 221-222
4. Exemption from the above conditions may be granted by the Programme Committee under exceptional circumstances.

Written Examination (Applicants must attend the examination date accurately to your admission round)

Subjects for examination	**Time** (Morning session)
1. Advanced Mathematics	9.00 – 12.00 a.m.
Examination Place Mahidol University , Salaya , Nakhonpathom more details : www.grad.mahidol.ac.th	

Curriculum Structure

	Credit
Prerequisite Courses	-
Required Courses	12
Elective Courses	12
Thesis	12

	Credit
Prerequisite Courses	
SCMA 501 Linear Algebra	3(3-0-6)
SCMA 502 Advanced Calculus	3(3-0-6)
SCMA 503 Differential Equations	3(3-0-6)
SCMA 504 Probability and Statistics	3(3-0-6)
SCMA 505 Computer Programming I	3(3-0-6)
SCMA 506 Complex Variables	3(3-0-6)
SCMA 507 Vector Analysis	3(3-0-6)
SCMA 508 Calculus of Several Variables	3(3-0-6)
SCMA 509 Principle of Partial Differential Equations	3(3-0-6)
SCMA 510 General Topology	3(3-0-6)
Required Courses	
SCMA 601 Applied Analysis I	3(3-0-6)
SCMA 611 Analysis I	3(3-0-6)
SCMA 613 Numerical Analysis I	3(3-0-6)
SCMA 694 Applied Mathematics Seminar I	1(1-0-2)
SCMA 695 Applied Mathematics Seminar II	1(1-0-2)
SCMA 696 Applied Mathematics Seminar III	1(1-0-2)
Elective Course	
SCID 518 Generic Skills in Science Research	1(1-0-2)
SCMA 602 Applied Analysis II	3(3-0-6)
SCMA 603 Theory of Ordinary Differential Equations	3(3-0-6)
SCMA 604 Algebraic Topology I	3(3-0-6)
SCMA 605 Algebraic Topology II	3(3-0-6)
SCMA 606 Topology	3(3-0-6)
SCMA 607 Functional Analysis	3(3-0-6)
SCMA 608 Modern Algebra	3(3-0-6)
SCMA 609 Current Topics in Mathematics I	3(3-0-6)
SCMA 610 Real Analysis	3(3-0-6)
SCMA 614 Numerical Analysis II	3(3-0-6)
SCMA 617 Computer Methods For Statistical Applications	3(2-2-5)
SCMA 619 System Science	3(3-0-6)
SCMA 620 Complex Analysis	3(3-0-6)
SCMA 625 Partial Differential Equations	3(3-0-6)

SCMA 626 Applied Functional Analysis	3(3-0-6)
SCMA 627 Differentiable Manifolds	3(3-0-6)
SCMA 628 Finite Element Methods	3(3-0-6)
SCMA 629 Current Topics in Computational Mathematics	3(3-0-6)
SCMA 630 Operations Research	3(3-0-6)
SCMA 631 Decision Analysis	3(3-0-6)
SCMA 632 Game Theory	3(3-0-6)
SCMA 633 Stochastic Processes	3(3-0-6)
SCMA 634 Queuing Theory	3(3-0-6)
SCMA 635 Inventory Theory	3(3-0-6)
SCMA 636 Simulation Modeling	3(3-0-6)
SCMA 637 Combinatorial Mathematics	3(3-0-6)
SCMA 638 Graph Theory	3(3-0-6)
SCMA 639 Current Topics in Statistical Mathematics	3(3-0-6)
SCMA 640 Probability Theory	3(3-0-6)
SCMA 641 Multivariate Analysis	3(3-0-6)
SCMA 642 Advanced Experimental Design	3(3-0-6)
SCMA 643 Time Series Analysis	3(3-0-6)
SCMA 644 Linear Models	3(3-0-6)
SCMA 645 Generalized Liner Models	3(3-0-6)
SCMA 646 Numerical Methods I	3(3-0-6)
SCMA 647 Numerical Methods II	3(3-0-6)
SCMA 648 Advanced Numerical Analysis	3(3-0-6)
SCMA 649 Current Topics in Mathematics II	3(3-0-6)
SCMA 651 Classical Mechanics	3(3-0-6)
SCMA 652 Electromagnetic Theory	3(3-0-6)
SCMA 653 Quantum Mechanics	3(3-0-6)
SCMA 658 Advance Topics in Applied Mathematics I	3(3-0-6)
SCMA 659 Advance Topics in Applied Mathematics II	3(3-0-6)
SCMA 660 Theoretical Physics	3(3-0-6)
SCMA 662 Compressible Fluid Dynamics	3(3-0-6)
SCMA 664 Optimization and Control	3(3-0-6)
SCMA 665 Numerical Methods in Partial Differential Equations	3(3-0-6)
SCMA 666 Applications of Complex Analysis	3(3-0-6)
SCMA 667 Applied Partial Differential Equations	3(3-0-6)
SCMA 668 Differential Geometry	3(3-0-6)
SCMA 669 Current Topics in Mathematical Physics I	3(3-0-6)
SCMA 670 Advanced Differential Equations	3(3-0-6)
SCMA 671 Mathematical Physics	3(3-0-6)
SCMA 673 Dynamical Systems	3(3-0-6)
SCMA 674 Mathematical Models in The Life Sciences	3(3-0-6)
SCMA 675 Statistical Mechanics	3(3-0-6)

SCMA	676 Mathematics for Computing	3(3-0-6)
SCMA	677 Data Mining	3(3-0-6)
SCMA	678 Mathematics for (Natural) Language Processing I	3(3-0-6)
SCMA	679 Mathematics for (Natural) Language Processing II	3(3-0-6)
SCMA	680 Mathematical Methods for Artificial Intelligence	3(3-0-6)
SCMA	681 Special Topics in Applied Mathematics I	3(3-0-6)
SCMA	682 Special Topics in Applied Mathematics II	3(3-0-6)
SCMA	683 Special Topics in Applied Mathematics III	3(3-0-6)
SCMA	684 Dynamic Meteorology I	3(3-0-6)
SCMA	685 Dynamic Meteorology II	3(3-0-6)
SCMA	686 Numerical Weather Prediction	3(3-0-6)
SCMA	687 Advanced Topics in Mathematical Methods for Artificial Intelligence	3(3-0-6)
SCMA	688 Statistical Inference	3(3-0-6)
SCMA	689 Bayesian Statistics	3(3-0-6)

Thesis

SCMA	698 Thesis	12(0-36-0)

*** These may change in cases where there are suggestions for the improvement of the curriculum**

Application Process

Application is only available via online application at www.grad.mahidol.ac.th

Required Documents

Applicants must upload all documents via online admission system. All documents must be in PDF format (maximum size 2 MB). Photograph must be in JPEG format.

- Recent photographs (1x1 inch in size)
- A copy of an applicant's degree certificate or a letter of graduation certification (for an applicant with a degree completion)
- A letter certifying that an applicant is currently in the final year prior to graduation (for an applicant seeking for a degree)
- A detailed transcript of a degree (for an applicant with a degree completion)
- A grade report with course names and grades received from the first to the current semester prior to graduation
- A copy of identification card
- A copy of house registration certification
- A copy of Certificate of English proficiency :
  IELTS / TOEFL INTERNET BASED / TOEFL ITP / MU GRAD TEST (Computer based)
- A copy of proof of payment.

Job option after graduation

- Experts in mathematics
- Programmers, Statisticians
- Research assistants

Further information may be obtained from the Director of Graduate Studies, Applied Mathematics:

1. **Assoc. Prof. Dr. Duangkamon Baowan (E-mail : Duangkamon.bao@mahidol.ac.th)**
   Room M 204/6, M Building, Floor 2,
   Department of Mathematics, Faculty of Science.
   Tel. : 0 2201 5350 Fax. : 0 2201 5343

Program Coordinator

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Tel. : 0 2201 5342 Fax. : 0 2201 5343

Note 1. For more education information : **www.grad.mahidol.ac.th**

For more information please contact The Student Admission Section.
Tel . 0 2441 4125 ext. 208-210 , 0 2441 9129, E-mail : gradthai@mahidol.ac.th