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 :   10   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. have a TOEFL score of at least 480, TOEFL computer-based score of 157, TOEFL Internet-based score of 54, or IELTS score of 4.5 or pass the English Proficiency Examination arranged by the Faculty of Graduate Studies.

   Those who do not have any of the test scores specified above will have to take the English Proficiency Examination of the Faculty of Graduate Studies on the specified examination day.
4. In case your qualification does not match to the admission criteria, candidates must prior attach A Requesting Form for Examination" approved by the program director. The form must be submitted before making the application. Kindly download here: http://www.grad.mahidol.ac.th/grad/admission/form_th.php

   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.)

First Round January 17, 2015		Second Round May 16, 2015	
Subjects for examination	Time	Subjects for examination	Time
1. English	8.30 - 11.30 a.m.	1. English	8.30 - 11.30 a.m.
2. General Knowledge	11.30 - 12.30 p.m	2. General Knowledge	11.30 - 12.30 p.m.
3. Advanced Mathematics	1.30 - 4.30 p.m.	3. Advanced Mathematics	1.30 - 4.30 p.m.

Examination Place
   Mahidol University , Salaya , Nakhonpathom more details : www.grad.mahidol.ac.th or Announcement at Faculty of Graduate Studies branches.

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

Prepare the following required documents to submit via online admission system or post :

- Two (2) recent photographs (1x1 inch in size)

- A copy of an applicant's degree certificate or a letter of graduation certification   2 copies
  (for an applicant with a degree completion)

- A letter certifying that an applicant is currently in the final year prior to graduation   2 copies
  (for an applicant seeking for a degree)

- A detailed transcript of a degree (for an applicant with a degree completion)   2 copies

- A grade report with course names and grades received from the first to the current   2 copies
  semester prior to graduation

- A copy of identification card   2 copies

- A copy of house registration certification   2 copies

- A copy of Certificate of English score: TOEFL/IELTS/MU-Test (if any). See detail here: 2 copies
  http://www.grad.mahidol.ac.th/grad/academicinfo/engstandard2553_th.php
  Those who early submit a valid English score prior to the examination will be exempt
  from English test on the examination date.

- A copy of proof of payment.

Submitting documents via online admission system.

- All documents must be in <u>pdf format</u> (maximum size 2 MB)
- Recent photograph must be in <u>jpeg format</u> only (maximum size 2 MB)

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. Lect. Dr. Somsak Orankitjaroen   (E-mail : somsak.ora@mahidol.ac.th)

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   Department of Mathematics, Faculty of Science.

   Tel.   : 0 2201 5438   Fax. : 0 2201 5343

Program Coordinator

   Mr. Natthawooth Siangdee   (E-mail : natthawooth.sin@mahidol.ac.th)

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   Department of Mathematics, Faculty of Science.

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

<u>Note</u>   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