

12/07/2015



Proposal to the Senate Educational Policy Committee

PROPOSAL TITLE: Change to course requirements for Master of Science in the Teaching of Mathematics in the Department of Mathematics, College of LAS.

SPONSOR: Richard Laugesen, Professor of Mathematics and Director of Graduate Studies, 333-1329, laugesen@illinois.edu

COLLEGE CONTACT: Karen Carney, Associate Dean, 333-1350, kmcarney@illinois.edu

BRIEF DESCRIPTION: We propose (1) to change the requirement “CI 436 & CI 560” to “7 or 8 hours of coursework from the College of Education in courses related to the teaching of mathematics at the secondary or college level, subject to the approval of the Director of Graduate Studies” and (2) to remove MATH 406 from the list of courses which cannot be counted toward the degree.

Current Requirements:	Current Hours	Revised Requirements:	Revised Hours
<i>Required Courses</i>		<i>Required Courses</i>	
CI 436 & CI 560	8 Hours	7 or 8 hours of coursework from the College of Education in courses related to the teaching of mathematics at the secondary or college level, subject to the approval of the Director of Graduate Studies.	7 or 8 Hours
MATH 405, MATH 406, MATH 415, MATH 444, and MATH 499 cannot be counted toward graduate degrees in Math.		MATH 405, MATH 415, MATH 444, and MATH 499 cannot be counted toward the degree.	

JUSTIFICATION: The courses CI 436 and CI 560, while relevant to the degree, are not offered frequently enough to allow students to reliably complete the program on schedule. In addition, there are now other courses which relate to the teaching of mathematics at the secondary and college levels, including frequent topics courses in CI. Revising the requirements to permit more flexibility in choice of courses will still satisfy the intention of exposing students to the serious study of mathematics education, while allowing them to choose courses which are most related to their career goals and to finish the degree on

time. We request 7 or 8 hours because some 3 hour 400-level courses are suitable for this requirement.

MATH 406 is a rigorous course in the history of calculus, with an emphasis on a close tracing of mathematical ideas and techniques. It provides valuable background and deeper understanding for a course (calculus) which graduates of the program are likely to teach during their careers.

BUDGETARY AND STAFF IMPLICATIONS: *(Please respond to each of the following questions.)*

1) Resources

- a. *How does the unit intend to financially support this proposal?*
No financial support is needed for this proposal.
- b. *How will the unit create capacity or surplus to appropriately resource this program? If applicable, what functions or programs will the unit no longer support to create capacity?*
No additional capacity in courses will be needed. The MS in the Teaching of Mathematics program typically has only 2-6 students enrolled at any given time.
- c. *Will the unit need to seek campus or other external resources? If so, please provide a summary of the sources and an indication of the approved support.*
No.
- d. Please provide a letter of acknowledgment from the college that outlines the financial arrangements for the proposed program.

2) Resource Implications

- a. *Please address the impact on faculty resources including the changes in numbers of faculty, class size, teaching loads, student-faculty ratios, etc.*
The proposal will have no impact on faculty resources. The number of students in the program is very small (2-6 at any one time, typically). Students in the program already elect to enroll in courses in the College of Education beyond CI 436 and CI 530. MATH 406 has been enrolled at only half to two-thirds capacity in recent years and can easily accommodate a few more students.
- b. *Please address the impact on course enrollment in other units and provide an explanation of discussions with representatives of those units. (A letter of acknowledgement from units impacted should be included.)*
No impact on course enrollment in other units is expected.
- c. *Please address the impact on the University Library (A letter of estimated impact from the University Librarian must be included for all new program proposals. If the impact is above and beyond normal library business practices, describe provisions for how this will be resourced.)*

No impact on the University Library is expected.

d. *Please address the impact on technology and space (e.g. computer use, laboratory use, equipment, etc.)*

No impact on technology and space is expected.

DESIRED EFFECTIVE DATE: Spring 2016.

STATEMENT FOR PROGRAMS OF STUDY CATALOG:

Master of Science in Teaching of Mathematics

A rigorous course in algebra at the level of MATH 417 or above	3 or 4
A rigorous course in analysis at the level of MATH 447 or above	3 or 4
7 or 8 hours of coursework from the College of Education in courses related to the teaching of mathematics at the secondary or college level, subject to the approval of the Director of Graduate Studies in Mathematics.	7 or 8
Total Hours	32

Other Requirements¹


Other requirements may overlap	
Specific course and sequence requirements must be met.	
Two semesters of teaching under the supervision of a mentor in two categories	
MATH 405 , MATH 415 , MATH 444 , and MATH 499 cannot be counted toward the degree.	
Minimum Hours Required Within the Unit:	24
Minimum 500-level Hours Required Overall:	12 (8 in Math)
Minimum GPA:	3.0

¹ For additional details and requirements refer to the department's [Guide to Graduate Studies](#) and the [Graduate College Handbook](#).

This program does not confer any state certification as a teacher. Students who want to be certified as a high school teacher should consult the College of Education about the requirements for certification.

CLEARANCES: (Clearances should include signatures and dates of approval. These signatures must appear on a separate sheet. If multiple departments or colleges are sponsoring the proposal, please add the appropriate signature lines below.)

Signatures:


Unit Representative: _____

5/27/15
Date: _____


College Representative: _____

9/28/15
Date: _____

Graduate College Representative:

Date:

Mathematics Graduate Degree Programs Overview Tab in the Academic Catalog (no changes needed)

Mathematics

- [Overview](#)
- [Masters](#)
- [Doctoral](#)

www.math.illinois.edu

Chair of the Department: Matthew Ando
Director of Graduate Studies: Richard Laugesen
273 Altgeld Hall
1409 West Green Street
Urbana, IL 61801
(217) 333-5749
E-mail: math-grad@illinois.edu

Major: Applied Mathematics
Degrees Offered: M.S.
Graduate Concentration: Actuarial Science (in Applied Mathematics only)

Major: Mathematics
Degrees Offered: M.S., Ph.D.

Major: Teaching of Mathematics
Degrees Offered: M.S.

Medical Scholars Program: Doctor of Philosophy (Ph.D.) in Mathematics and Doctor of Medicine (M.D.) through the [Medical Scholars Program](#)

Graduate Degree Programs

The department offers graduate study leading to the Master of Science in Mathematics, the Doctor of Philosophy in Mathematics, the Master of Science in Applied Mathematics, and the Master of Science in the Teaching of Mathematics. Opportunity also exists for specializing in computational science and engineering within the department's graduate programs via the [Computational Science and Engineering \(CSE\) Option](#).

Admission

In addition to the University requirements for admission to the Graduate College, there are a number of requirements that are specific to the Department of Mathematics.

GRE (Graduate Record Examination) scores are required by the Department of Mathematics, both the general test and the subject test in mathematics, for admission from all applicants to the PhD program who live in the United States or Canada. The tests are not required from other applicants, but students' chances of admission and of receiving financial aid will be better if they submit these test scores. GRE scores are also required for all fellowship applications.

All students admitted to the PhD program must have full financial support, either from the Department of Mathematics (teaching assistantship or fellowship) or from another source (minimum 5 years).

For students whose native language is not English the University admission requirements include proof of proficiency in English, as measured by the TOEFL (Test of English as a Foreign Language) or IELTS (International English Language Testing System). For more information on these requirements for admission see www.grad.illinois.edu/admissions/taengprof.htm.

In addition, a minimum TOEFL iBT speak score of 22 (or IELTS 7.0) is required to be considered for the Math Ph.D. program at Illinois. A minimum TOEFL iBT score of 20 (IELTS 7.0) is required to be considered for the Math M.S. programs at Illinois. The only exceptions will be for those applicants exempt from the English requirement for admission, (see www.grad.uiuc.edu/admissions/instructions/04c).

In addition, International Teaching Assistants must demonstrate proficiency in spoken English, as measured by the Internet Based TOEFL (iBT), the IELTS, the TSE (Test of Spoken English), or the university-administered EPI (English Proficiency Interview) test. For more information on these requirements for appointment as an International TA see cte.illinois.edu/testing/oral_eng/main.html. Students who do not satisfy these requirements are not eligible to receive appointments as Teaching Assistants in the classroom.

International students who have studied in the United States may be exempt from the English admission requirement, but must still submit the TOEFL or equivalent to qualify as a teaching assistant.

The submission deadline for applications for Fall Semester that include a request for financial aid is January 7. The deadline for supplemental materials (including letters of recommendation and transcripts) is January 7. Only applications which are complete will be reviewed. Applications for admission to M.S. programs without funding can be considered up to March 1. The deadline for all applications for spring semester is the preceding October 1. The Department of Mathematics reserves the right to close the acceptance of applications at any time.

Medical Scholars Program

The Medical Scholars Program permits highly qualified students to integrate the study of medicine with study for a graduate degree in a second discipline, including mathematics.

Students may apply to the Medical Scholars Program prior to beginning graduate school or while in the graduate program. Applicants to the Medical Scholars Program must meet the admissions standards for and be accepted into both the doctoral graduate program and the College of Medicine. Students in the dual degree program must meet the specific requirements for both the medical and graduate degrees. On average, students take eight years to complete both degrees. Further information on this program is available by contacting the Medical Scholars Program, 125 Medical Sciences Building, (217) 333-8146 or at www.med.illinois.edu/msp.

Graduate Teaching Experience

Although teaching is not a general Graduate College requirement, experience in teaching is considered an important part of the graduate experience in this program.

Financial Aid

Financial aid is available in the form of teaching assistantships, research assistantships, and fellowships. The same application is used for decisions on admission, assistantships, and fellowships. The deadline for equal consideration for fellowships and assistantships is January 7, but later applications for assistantships will be considered if positions are available.

Name of existing Illinois (UIUC) degree: _____

Name of non-Illinois partnering institution: _____

Location of non-Illinois partnering institution:

State of Illinois US State: _____ Foreign country: _____

- B. Proposal to create a new academic unit (college, school, department, program or other academic unit):

Name of proposed new unit: _____

- C. Proposal to rename an existing academic unit (college, school, department, or other academic unit):

Current name of unit: _____

Proposed new name of unit: _____

- D. Proposal to reorganize existing units (colleges, schools, departments, or program):

1. Proposal to change the status of an existing and approved unit (e.g. change from a program to department)

Name of current unit including status: _____

2. Proposal to transfer an existing unit:

Current unit's name and home: _____

Proposed new home for the unit: _____

3. Proposal to merge two or more existing units (e.g., merge department A with department B):

Name and college of unit one to be merged: _____

Name and college of unit two to be merged: _____

Proposed name and college of new (merged) unit: _____

4. Proposal to terminate an existing unit:

Current unit's name and status: _____

- E. **Other educational policy proposals** (e.g., academic calendar, grading policies, etc.)

Nature of the proposal: _____

Revised 10/2012

UNIVERSITY OF ILLINOIS
AT URBANA-CHAMPAIGN

College of Liberal Arts and Sciences
Office of the Dean

2090 Lincoln Hall
702 S. Wright Street, MC-448
Urbana, IL 61801



September 28, 2015

Wojtek Chodzko-Zajko
Dean, Graduate College
204 Coble Hall MC-322

Dear Dean Chodzko-Zajko:

The Committee on Courses and Curricula, on behalf of the Faculty of the College of Liberal Arts and Sciences has voted to approve the following proposal:

Revision to the Master of Science in the Teaching of Mathematics

Please let me know if you have any questions on this proposal. This proposal is now ready for review by the Graduate College for proposed implementation Spring 2016.

Sincerely,

A handwritten signature in black ink that reads "Karen M. Carney". The signature is written in a cursive style.

Karen M. Carney
Associate Dean

enclosure

C: Professor Matt Ando
Professor Richard Laugesen