APPLIED MATHEMATICS: ACTUARIAL SCIENCE, MS

for the Doctor of Philosophy in Mathematics, Actuarial Science and Risk Analytics Concentration

department chair: Jeremy Tyson
director of graduate studies: Lee DeVille
overview of admissions & requirements:
overview of grad college admissions & requirements: https://grad.illinois.edu/admissions/apply
department website: http://www.math.illinois.edu
program website: program website link
department faculty: department faculty link
college website: https://las.illinois.edu/
department office: 273 Altgeld Hall, 1409 West Green Street, Urbana, IL 61801
phone: (217) 333-5749
e-mail: math-grad@illinois.edu

Requirements

Code   Title                               Hours

Students must demonstrate competence in five core courses including the following: 1

MATH 540 Real Analysis                     4
MATH 561 Theory of Probability I           4
MATH 563 Risk Modeling and Analysis        4
STAT 510 Mathematical Statistics I         4

Select one of:

MATH 511 Intro to Algebraic Geometry
MATH 518 Differentiable Manifolds I
MATH 525 Algebraic Topology I
MATH 530 Algebraic Number Theory
MATH 531 Analytic Theory of Numbers I
MATH 542 Complex Variables I
MATH 550 Dynamical Systems I
MATH 553 Partial Differential Equations
MATH 570 Mathematical Logic
MATH 580 Combinatorial Mathematics

Students must also demonstrate proficiency in undergraduate complex analysis, which can be done by a B+ in MATH 448, a B+ in MATH 542, or by passing the exam associated to MATH 542.

Students must demonstrate competence in two of the following:

ASRM 575 Life Insurance and Pension Mathematics 4
ASRM 510 Financial Mathematics                4
ASRM 561 Loss Data Analytics & Credibility    4

Master's equivalency                        32
MATH 599 Thesis Research (0 min applied toward degree) 0

Total Hours required for the degree         96

Other requirements

Requirement                               Description

Other requirements may overlap.

MATH 405, MATH 406, MATH 415, MATH 444, and MATH 499 cannot be counted toward this graduate degree.

64 hours in residence
Masters Degree Required for Admission to PhD No

Information listed in this catalog is current as of 03/2020
<table>
<thead>
<tr>
<th>Requirement</th>
<th>Required</th>
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<tbody>
<tr>
<td>Comprehensive Exam Required</td>
<td>Yes</td>
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<tr>
<td>Preliminary Exam Required</td>
<td>Yes</td>
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<tr>
<td>Final Exam/Dissertation Defense Required</td>
<td>Yes</td>
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<tr>
<td>Dissertation Deposit Required</td>
<td>Yes</td>
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<tr>
<td>Minimum GPA</td>
<td>3.25</td>
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1 To demonstrate competence, a student must receive a B+ or higher in the course, or pass a written exam on the topic.