

# MATHEMATICS, DOCTOR OF PHILOSOPHY (PH.D.)

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The Ph.D. program does not require an M.A. degree, but applicants who are accepted should show, on the basis of their undergraduate record and recommendations, that they possess not only marked promise in mathematical activities but the potential to perform on a creative level. Like the M.A. program, admission may be granted on a provisional basis.

**Advance to Candidacy:** In addition to completing the course requirements below, students must pass two qualifying exams, and in addition must take and pass four semesters of courses from a specific list with a grade of B or better, and an overall grade point average of at least 3.3 in these four courses. These four courses must be distinct from the ones supporting the qualifying exams and constitute the third and final qualifying exam requirement. The two qualifying exams and four additional courses, must be passed/completed by January of the student's third year in the graduate program. A student may alternatively take and pass a third (and possibly, a fourth) qualifying exam in place of two (or four) qualifying courses. If successful in these written examinations and courses, students must do advanced reading and coursework in their special area of interest before they can be admitted to candidacy and begin dissertation research.

The purpose of the written qualifying exams is to indicate that the student has the basic knowledge and mathematical ability to begin advanced study. Passing the exams is thus supposed to certify understanding of (selected) first-year graduate material. These examinations are given twice a year, in January and August. A student may take one or more examinations at a time.

Before advancing to candidacy, students must also obtain the consent of a faculty member who will accept the responsibility of directing a dissertation.

**Post-Candidacy:** Complete at least 12 credits of MATH899 Doctoral Dissertation Research and successfully defend a dissertation. The dissertation must represent an original contribution to mathematical knowledge and is usually published in a mathematical journal.

Course	Title	Credits
<b>Core Requirements</b>		
Select 36 credits of coursework <sup>1</sup>		30
Pass the written examination requirements		
Pass a final oral examination		
<b>Dissertation Research Requirements</b>		
MATH899	Doctoral Dissertation Research	12
<b>Total Credits</b>		<b>42</b>

<sup>1</sup> At least 27 credits at the 600-700 level and at least 18 credits in the Department of Mathematics.