Graduate Admission and Application

Admission requirements for the Ph.D. Program

(in either Mathematics or Statistics)

In order to gain admission to the interdisciplinary Ph.D. program with Mathematics as the coordinating discipline, the applicant must meet the following requirements:

1. Minimum requirements set forth by the School of Graduate Studies. This information may be found under the Prospective Students tab on the School of Graduate Studies website.
2. At least a Bachelor's degree in Mathematics, Statistics, or related field from an accredited college or university. A bachelor's degree in another subject will suffice, provided that the applicant has successfully completed at least three Mathematics courses beyond Calculus I, II, and III.
3. An overall grade-point average (GPA) of at least 3.0 on a 4.0 scale during the Bachelor's program, or an overall GPA of at least 3.0 on all post-Bachelor's work.
4. Be recommended for admission by the doctoral faculty review groups in both Mathematics and the co-discipline.
5. One can find a list of possible co-disciplines on the iPh.D. Studies at UMKC page.

Application Information for the iPh.D. Program

1. A complete application consists of the following materials:
   i. A set of all official transcripts from work completed at colleges and/or universities
   ii. A one-page statement detailing the student's educational plans
   iii. A valid GRE score
   iv. Three letters of reference
   v. International applicants must submit documentation of their Test of English as a Foreign Language score if they have studied less than two years full time in a U.S. academic program or a comparable program in an English-speaking country. The applicant must have attained a score of at least 550 on the paper-based test, 213 on the computer-based test, or 80 on the internet-based test.

Degree Requirements for iPh.D.

In order to complete the Interdisciplinary Ph.D. (iPh.D.) with Mathematics as the primary discipline, students are expected to complete the following requirements:

1. Qualifying Coursework:
    a. A student who is admitted to the iPh.D. program while having not completed all of the qualifying coursework as described below is required to complete the missing courses with a GPA of 3.0 or higher.
    b. The qualifying courses for the iPh.D. are as follows:
        i. Mathematics Emphasis:
        MATH 5509: General Algebra I
        MATH 5513: Real Variables I
        MATH 5532: Advanced Numerical Analysis I
        MATH 5510: Complex Variables I
        MATH 5521: Differential Equations
        MATH 5545: Mathematical Methods in Science and Engineering
        ii. Statistics Emphasis:
        STAT 5501: Statistical Design of Experiments
        MATH 5513: Real Variables I
        STAT 5537: Mathematical Statistics I
        STAT 5547: Mathematical Statistics II
        STAT 5551: Applied Statistical Analysis
        STAT 5565: Regression Analysis
        STAT 5572: Multivariate Analysis
2. Following the completion of 18 hours of course work, the student is required to submit the Interdisciplinary Ph.D. Plan of Study form.
3. Doctoral Course Work
    a. Following the completion of the Qualifying Coursework, the student needs to complete the Doctoral Coursework as described below.
    b. Mathematics Emphasis
        i. MATH 5519: General Algebra II
        ii. MATH 5523: Real Variables II
        iii. MATH 5542: Advanced Numerical Analysis II
        iv. Any one of STAT 5576, STAT 5578, or STAT 5588.
    c. Statistics Emphasis
        i. STAT 5576: Probability and Measure
        ii. STAT 5578: Advanced Mathematical Statistics
        iii. STAT 5588: Theory of General Linear Models
        iv. Any one of MATH 5519, MATH 5523, or MATH 5542.
4. Qualifying Examinations
    a. Within a year of completing the Doctoral Coursework, the student is required to complete the iPh.D. qualifying examinations. The written examinations under either emphasis are based on two of the three Doctoral courses.
        i. For the Mathematics emphasis, the qualifying examinations are based on two of the following Doctoral courses: MATH 5519, MATH 5523, and MATH 5542.
        ii. For the Statistics emphasis, the written examinations are based on two of the following Doctoral courses: STAT 5576, STAT 5578, and STAT 5588.
        iii. The student may take one written examination from the opposite emphasis if his or her supervisory committee deems it in the best interest of the student's Plan of Study, provided that the student has taken the course on which the examination is based.
        iv. The two exams must be taken within a two-week period.

v. If a student fails one or more qualifying examination(s) on the first attempt, the student may retake the failed parts from the first attempt after a period of twelve (12) weeks. If the student fails the qualifying examination(s) a second time, he or she is terminated from the iPh.D. program in Mathematics.

5. Comprehensive Examination
    a. Within two years of successful completion of the qualifying examinations, the student is required to complete the iPh.D. Comprehensive Examination.
    b. The iPh.D. Comprehensive examination consists of both a written portion and an oral portion.
        i. The written portion of the examination is developed by the student's supervisory committee, and it consists of questions related to the student's research and possible avenues for future work. The student is allotted two (2) weeks to complete the written portion of the examination.
        ii. Following the completion of the written portion of the Comprehensive Examination, the student shall submit his or her responses to each member of the supervisory committee.
        iii. The oral portion of the Comprehensive Examination occurs approximately two (2) weeks after the student has submitted his or her written portion of the examination. The oral portion is a two-hour session between the student and the members of the supervisory committee in which the student describes his or her research and fields questions and comments related to the responses provided in the written portion of the examination.
        iv. Following the completion of the iPh.D. Comprehensive Examination, the student is admitted to Candidacy. Following admission to Candidacy, the student is required to complete at least twelve (12) Research and Thesis credit hours.
        v. In the event that the student fails either the written or the oral portion of the Comprehensive Examination, he or she may retake the examination after a period of twelve (12) weeks, per School of Graduate Studies regulations. A failure of either part of the examination a second time will result in the student's termination from the iPh.D. program.
6. Dissertation and Final Oral Examination
    a. Within two years of admission to Candidacy, the student is required to have completed the necessary research and writing to form the Dissertation. Once the Dissertation has been written, the student is required to complete the Final Oral Examination.
    b. The Final Oral Examination is a two-hour discussion between the student and the supervisory committee. The student must prepare a presentation that outlines the content of the Dissertation.
    c. The presentation is a public event, so anyone is free to attend.
    d. Following the completion of the presentation, a closed-door session takes place between the student and the supervisory committee. During this session, the Candidate fields questions and comments regarding the content of the Dissertation.
    e. Following successful completion of the Final Oral Examination, the committee will make recommendations for revisions to the dissertation, and the Candidate is required to address these recommendations in order to complete the Interdisciplinary Ph.D.
7. Additional Notes:
    a. All iPh.D. students with Mathematics as the primary discipline are required to attend at least five Department Graduate Seminars per semester in addition to the required course work.

b. The student is also required to complete the required course work set forth by his or her co-discipline.
c. The student must satisfy all requirements set forth by the School of Graduate Studies.