GUIDELINES FOR THE ENGINEERING APPLIED MATHEMATICS PROGRAM FOR THE PH.D. IN ENGINEERING DEGREE

DIVISION OF APPLIED MATHEMATICS
DEPARTMENT OF THEORETICAL AND APPLIED MATHEMATICS
THE UNIVERSITY OF AKRON
Introduction

The Interdisciplinary Ph.D. program in Engineering Applied Mathematics is coordinated by faculty of the College of Engineering and the Department of Theoretical and Applied Mathematics. The emphasis of the program is twofold: first, to provide training for students to formulate, analyze and solve contemporary and significant problems in engineering using modern methods of mathematical analysis, and second, to develop students' interdisciplinary communication skills, thereby enhancing their ability to interact with other professionals.

The following provides broad guidelines regarding program requirements for the Ph.D. degree. For more detailed information the student should consult the document on Interdisciplinary Doctoral Procedures provided by the College of Engineering.

Academic Matters - Ph.D. DEGREE

The first year of the Ph.D. Student

1. Upon arrival the student will meet with an initial advisory faculty committee. This committee will conduct a placement review to determine an appropriate initial plan of study consisting of at most 18 credit hours.

2. Before completion of the initial plan of study the student must identify an interdisciplinary field of study, a dissertation director and form an interdisciplinary doctoral committee (IDC).

3. The chair of the IDC must be in the student's home department or program.

4. The IDC shall consist of six members with an equal number from the Department of Theoretical and Applied Mathematics and the College of Engineering.

The Plan of Study

The Plan of Study is established by the IDC in accordance with the following guidelines:

1. The Plan of Study has a minimum of 96 credit hours with a minimum of 36 credit hours of course work at the 600-700 level of which none are special topics courses. At least 18 credits of this course work must be from the College of Engineering and at least 18 credits from the Department of Theoretical and Applied Mathematics.

2. The intent of the course work in the Plan of Study is to provide background necessary to pass the qualifying examinations and for the student to begin the dissertation research.

3. Included in the Plan of Study is a language requirement specified by the IDC.
The Qualifying Examinations

1. The Qualifying Examinations consist of two components: One component is composed and administered by the Department of Theoretical and Applied Mathematics and the second component will be composed and administered by the faculty from at least one of the Departments of the Engineering College.

2. The Qualifying Examinations should be attempted no later than the end of the student's first year of study and must be completed by the end of the student's second year of study.

3. Normally these Qualifying Examinations will be offered twice per year.

The Dissertation Proposal

The student must present an acceptable Proposal for Dissertation Research to the IDC. This should be done within one year after passing the Qualifying Examinations. The proposal shall be in written form and given to the IDC at least 10 days prior to the scheduled date of the Dissertation Proposal oral presentation.

The Candidacy Examination

1. The purpose of the Candidacy Examination is to test the student's ability to conduct independent research.

2. The student must pass the Candidacy Examination composed and administered by the IDC. This should be done within one year after passing the Qualifying Examination.

The Dissertation

The dissertation must be a scientifically acceptable and comprehensive study whose format meets all accepted standards of the College of Engineering and the IDC. The written dissertation should be given to the IDC at least 10 days prior to the scheduled date of the oral defense. The student must successfully pass this oral defense with no fail votes from the members of the IDC.