Informational Guidelines for Doctoral Students in the Department of Electrical Engineering and Computer Science

Number of Courses

The PhD program requires 54 credit hours (or 18 courses), of which 30 are normally obtained during a Master’s program, leaving 24 credit hours at the PhD level:

- For students with a Master of Science degree from an external institution, 30 credit hours (i.e., 10 courses) are required for the PhD degree;
- For students with a Master of Science from CUA, the requirement drops to 24 credit hours (i.e., 8 courses).

Comprehensive Exam

After the doctoral student has passed 18 credit hours (6 courses), he/she is eligible to take the Comprehensive Examination, consisting of three-hour examinations in three (3) subject areas. These subject areas are proposed by the student in consultation with his advisor.

The following steps are needed prior to comprehensive exam:

1. Register for either COMP 698: Comprehensive with class or
   i. COMP 699: Comprehensive without class

2. Fill out the forms: (The forms can be obtained from EECS office or Dr. Mohammed Arozullah)
   a. Doctoral Comprehensive Examination and Admission to Candidacy
b. Comprehensive Examination Permission slip

3. Obtain a current Transcript of courses taken by you toward Ph. D.

4. Select three courses in which you would like to take the comprehensive examination. It is preferred that these courses be at the 600 or 700 levels. However, if needed some 500 level courses can be acceptable. These courses should be at least in two different areas of EECS. Not more than two of these courses should be taught by the same instructor.

5. Provide the names of the instructors who taught these courses.

Please provide the items 2, 3, 4 and 5 to Dr. Mohammed Arozullah:

Professor Mohammed Arozullah  
Chairman of EECS Doctoral Comprehensive Committee  
Tel: 202-319-4284  
Fax: 202-319-5195  
Email: Arozullah@cua.edu

Dissertation Proposal

After the student has successfully passed the Comprehensive Exam, he/she may begin writing the Dissertation Proposal. This consists of three parts:

1. Short Proposal:  
   This form consists of the following:
   
   ● Statement of the Problem  
   ● Purpose  
   ● Methodology  
   ● Contribution and Originality  
   ● Selected references

2. Long Proposal:  
   This is intended to satisfy the department’s requirement for verifiable preliminary results; it is usually between 20 and 40 pages.

3. Oral Proposal Presentation:  
   The student submits the short form as well as the long form to his/her doctoral committee. After initial approval the student will have an oral proposal presentation that fulfills the following criteria:
   
   ● The candidate must demonstrate in-depth knowledge of the general subject area;
   ● The candidate must display reasonably comprehensive familiarity with the technical literature relevant to the projected field of study;
• The candidate is expected to clearly define the problem at hand and identify the anticipated contributions that will mark the success of the proposed study;
• The candidate must distinguish and situate the originality of the expected contributions, and compare them to existing results and/or alternate approaches to the problem;
• The candidate must answer satisfactorily any questions from the committee relating to the field of study, the expected contributions, and the potential impact of the proposed work.

Acceptance Criteria for Final PhD Dissertation

To ensure quality of dissertations and to have the work be known to others, effective Spring Semester 2010, new PhD candidates must have received the acceptance for publication of the major part of their dissertation in a minimum of ONE refereed journal and ONE conference article as necessary condition for acceptance of their dissertation.

Dissertation Oral Defense

Following successful completion of the research objectives laid out in the dissertation proposal, the complete dissertation is formally written and presented to the dissertation committee. This is followed by an oral defense in which the PhD candidate is to present the major findings of the research project to his/her doctoral committee, and successfully answer all questions raised by the committee members.