

# **THE SCHOOL OF BIOMEDICAL ENGINEERING, SCIENCE AND HEALTH SYSTEMS**

## **CANDIDACY EXAMINATION GUIDELINES (AY 2014/15)**

A student admitted into the PhD program is classified as a PhD student. After the successful completion of the PhD candidacy examination (described below), and after satisfying the course credit requirements (45 credits post Baccalaureate, or 15 credits, for post Master's), the classification of the student changes to Doctoral Candidate (DC).

### **PURPOSE OF THE CANDIDACY EXAM**

The candidacy examination explores the depth of understanding of the student in areas considered core to his/her specialty area in Biomedical Engineering or Science. The student is expected to be familiar with, and be able to use, the contemporary tools and techniques of the field and to demonstrate ability to analyze and critique the principle results and key findings.

### **COMPOSITION OF CANDIDACY COMMITTEE**

A Candidacy Exam Committee of at least five (5) members will be appointed in consultation with the Graduate Committee and the thesis advisor, to include at least three faculty members with a primary appointment in the School of Biomedical Engineering Science and Health Systems (the School), and at least one faculty member who is not a member of the School faculty. The student's advisor should be a member of the committee but not its Chair. The Chair shall be a School Faculty member. All members of the committee must attend the presentation in person or by Skype. Individual examination on a one on one basis are not permitted. If one member of the committee does not attend, an alternate faculty member from the graduate curriculum committee will be found.

### **EXAMINATION FORMAT**

The Biomedical Engineering and Biomedical Sciences PhD Candidacy Examination for the academic year 2014/15 will consist of:

1. Formation of a candidacy committee
2. Submission of a written preliminary proposal document at least two weeks prior to the defense, accompanied by Drexel unofficial transcript, and a resume (containing education, publications and presentations)
3. An oral presentation that mirrors the written proposal and a defense that includes open ended questions by the examination committee in a private session. It is recommended that the oral presentation should be approximately 30 minutes in duration. Please note that the defense is not restricted solely to the content of the preliminary proposal document.

### **TIMELINE AND DEADLINES**

The student must complete this examination no earlier than July 1st of her/his first year (2015) and no later than the end of summer term of the second year.

### **PREPARATION**

The student, in consultation with his/her advisor, will prepare a 7 page (not including references) preliminary proposal (formerly pre-proposal) of the intended dissertation research. The preliminary proposal will include the development of a single Specific Aim/Objective and a Background/Significance section. The Background/Significance section should include a literature review that critically evaluates previous work in the area, identifies gap(s) in knowledge, and leads to the formulation of a scientific question that will be addressed by the specific aim. Preliminary data is permitted but is not required. The student should be prepared to discuss what data would be necessary for a full proposal. Finally, the student should present an outline of the experimental or analytical approach to the problem. For this preliminary

proposal, detailed methods are not necessary, but the student should be aware of the capabilities and limitations of the proposed approaches.

#### **RESPONSIBILITIES OF THE STUDENT**

1. The student is responsible for arranging a time (Doodle is a suggested tool) during which all committee members must be present (Skype is permissible for those who would otherwise have difficulty attending). However, all committee members must attend the presentation and question session in one way or another.
2. The student is responsible for scheduling and room reservation (see School front desk for room reservations or email [dnc23@drexel.edu](mailto:dnc23@drexel.edu)) for the Candidacy presentation. Allow time for questioning when booking the room.
3. The student must submit a D3 form (if changes to the committee occur after the Candidacy and prior to the thesis proposal an updated D3 form should be filed)
4. The student must submit the written component of the Candidacy document to the entire committee, via email (and with a copy to [njb33@drexel.edu](mailto:njb33@drexel.edu)) at least two (2) weeks prior to the scheduled presentation. This time line is a courtesy to the examiners who will be developing uniformly fair and measured questions.
5. The student must bring forms D2 and D2a (one copy of D2a for each committee member) to the Candidacy presentation for committee's signatures.

#### **PASS/FAIL CRITERIA**

The Committee will meet in closed-door session immediately after the question and answer session and come to a consensus decision, with four possibilities based on the merit of the student's performance. Each committee member will also complete a form (based on the current D-2A form) highlighting strengths and weaknesses of the student's performance, and specifically addresses certain criteria:

1. Pass
2. Conditional pass: At the discretion of the candidacy committee, the student may pass the exam contingent on meeting one or more additional conditions. Examples of conditions include (but are not restricted to) taking a course on a particular topic perceived as lacking in the student's background, and receiving a B+ or better, revising the written Candidacy document to the satisfaction of all committee members, or providing a written review of one or more research articles related to a specified topic.
3. Re-take the candidacy examination within a period of 6 months, including submission of an extensively revised preliminary proposal document.
4. Failure and dismissal from the PhD program, with the option to engage in the master's program, at the discretion of the committee.

**If you have any questions or concerns please contact: Natalia Broz ([njb33@drexel.edu](mailto:njb33@drexel.edu)) and Dr. Andres Kriete ([ak3652@drexel.edu](mailto:ak3652@drexel.edu)).**