FAQ - Tips and Suggestions for EEB's Qualifying Exam Part 2, 'Proposal Defense'
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Purpose: Qualifying Exam Part 2 (aka, 'proposal defense' or 'research skills') is the second major evaluation of students in the EEB Graduate program. The FAQ below should help to address additional questions about this exam.

Target Audience: Third year EEB students, and the faculty who advise them

Use with: Grad Guide (pdf) | Committee meeting form (doc) | Sharepoint folder (link)

Where can I read about this exam?

- The Grad Guide talks about it, pg. 8-10.
- EEB ORG's Resource doc talks about it in section 14, under "prelims"

What is the purpose of this preliminary exam?

The dissertation proposal evaluation mostly looks forward. Where is this dissertation going? What does it promise? On what foundation does it sit? It provides a unique opportunity for creative input from the Advisory Committee at a key stage of development of the dissertation. Enjoy this 2-3 hours of focused attention on your ideas! However, it also provides an important check: has the student developed the research foundation necessary to complete the projects?

(1) To demonstrate proficiency of scholarship ('research skills').
Such attributes include, but are not limited to:

(A) accumulation of motivating data and modeling results, or equivalent (as should be expected for a third year student having completed two summers and various credits of L800 during the academic year)[1];

(B) firm grounding in conceptual theory and relevant literature (with extensive literature cited) upon which the proposal is built;

(C) clearly drawn and well-developed figures with helpful and informative captions; smooth and organized writing (with correct grammar, strong topic sentences, linear flow, tight and concise writing, etc.)

(2) *To demonstrate skills in grant writing and presentation*

(A) The nature of the argument: The problem to solve (research gap, new direction, synthesis, etc.) in each proposed chapter should be identified clearly, with supporting literature. The dissertation should pose new and significant problems, introduce new ways of thinking, conceptually unify disparate models,

[1] Consult your Advisor about expectations and norms. Many advisors typically expect the equivalent production of about a paper's worth of results (data, modeling, analysis), but the particular demonstration of that production may vary, and can depend upon the nature of the research. It may be mostly supporting a first chapter, it may be distributed among multiple chapters, may pilot out key new methodologies, etc. We maintain this flexibility on purpose.

and/or change how we think about nature. It should push the conceptual envelope of the student's field or fields.

(B) The role of data you have collected: Typically, presentation of the properly-analyzed data should build the case for the remaining chapters of the dissertation.[2]

(C) The role of the presentation: At the committee meeting, the student should present the argument using professional meeting/seminar-grade slides in a 30-45 minute talk. Also, the student should able to answer questions about the proposed research in a professional and knowledgeable manner[3].

What are the expectations of a successful proposal?

Students who successfully defend their proposal have:

(1) produced a well-written and motivated proposal, typically the equivalent of 10-15 single spaced pages. (Proposals can be too long, and technical writing should read concisely; please consult with your advisor about further expectations for format and length).

(2) delivered a talk that clearly delineated the proposal orally, using quality-made slides,

(3) coherently and cogently answered questions about the proposed work, fielding questions about the science, related ideas, etc.

What is the role of the research advisor in this exam?

(1) *Supervision and advising along the way*:
Students do not necessarily devise research plans independently from their Advisor. It is typical for students to routinely (e.g., weekly) meet with their advisor to discuss research ideas, plans, data collection, data analysis, etc., during the semesters leading up to the exam. Advisors usually play important roles in guiding the research.

(2) *Editing by your advisor?*
Advisors can have input on the proposal's creation. The degree of input is left to the discretion of the Advisor. However, students must take ownership of their proposal.

What are some of the norms but also variations that I should consider?

(1) *The scope:*
Most dissertations are composed of the equivalent of three (less common) to four (more common) publishable papers. Hence, the proposal should describe a vision for a scope of that size.

(2) *Interlocking pieces?*
Often, dissertation chapters relate to each other to create a synthetic whole. It can help to start with the end in mind. What will the overall argument of the dissertation talk look like? Then, how does each chapter

[2] However, sometimes changes in research directions prevent this. It is much better to present data on directions that will not lead to future chapters (perhaps in a supplement) than no data – in these cases, consult with your Advisor for the best approach.
[3] Formats vary. Sometimes, Committee members may interrupt during the presentation to address key questions. However, student and Committee preferences can guide the format. It is best to discuss this format at the start of the defense.

advance that argument? What part does it address? How do those pieces interlock? However, not all dissertations have such structure. Discuss with your Advisor.

(3) *How to manage co-advising?*
Co-advised students sometimes propose one or more chapters written under one advisor's supervision, and one or more under another. Sometimes students write a chapter with a minor advisor (e.g., a pedagogy chapter).

(4) *What if my dissertation changes direction after the proposal?*
The proposal is a snapshot of thinking at a given time of a student's development. Dissertations can take different intellectual directions after the proposal stage. Hence, you should think of the proposal as a negotiable contract. Some changes can lead to more rewarding dissertations. However, those changes should follow from Discussion with the Advisor and the Committee.

(5) *Practice talks:*
Students may/should practice their proposal talk with lab groups, peers, etc. The advisor may or may not choose to attend these sessions.

What are key logistics that I should keep in mind?

(1) When should I take the exam?
The dissertation proposal should be passed by the sixth semester of the EEB program (i.e., Spring of the third year). Hence, to preserve the ability for a retake / revision, the student should defend mid-semester. Students can defend a semester or two earlier (particularly students with MS degrees who transfer in credits).

(2) When should I submit the proposal? How?
Students should submit their written proposal to their committee via email (preferably Word and PDF formats) at least 7-10 days before the defense. (Reasoning: Committee members need time to read and think about the extant and proposed work. Consult with your advisor and committee on precise timing).

(3) *Some other key logistics:*

(A) Students should book the time and place for the meeting.

(B) Plan on an up-to-three hour meeting, complete with IDP discussion and advisor-free meeting period.

(4) What are some of the possible outcomes of the exam?

(A) <u>Pass</u> with no revision required (although the student may receive a great deal of input, constructive criticism, etc.).

(B) <u>Conditional pass</u> with a plan for revision (for varying reasons: to work on data analysis, rewriting of the language, redevelopment of plans for different chapters); the student must complete the mandated updates by the end of the sixth semester.

(C) <u>Fail</u> with option for retake - students can retake this exam but should complete it by the end of the sixth semester. Some students at this stage will opt to transfer to the EEB MS program instead (please see Grad Guide for details on how to transfer).

Final thoughts:

- The exam provides an important 'check-in' on your progress in EEB as a scholar, thinker, data analyst, and writer before you reach the 'PhD Candidate' phase.

- The proposal defense is not meant to be mysterious. Please initiate open dialogue with your advisor and more senior students for more insight. Also, ask your fellow older students for their proposals. Read a variety of them, look for key attributes of proposals that work well, and then emulate them. (This is how faculty learn to write proposals, create tenure dossiers, etc.)

- Please ask the GPD any questions that may arise. They will answer what they can.