The Vecellio Construction Engineering and Management Program.

The Ph.D. Process.


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1. Preliminary Focus
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This document details the procedures used to progress from the early preliminary discussion of a possible Ph.D. topic to the final completion and examination of the Ph.D. dissertation. It serves as a guide for both faculty and students and provides a series of milestones which experience has shown to be important in an efficient and effective process.

1. Preliminary Focus.
The student meets with faculty to discuss and identify a focus area for the work. Courses are selected to provide knowledge needed to support work in the focus area. The faculty member likely to become the major professor is identified and a preliminary committee is formed.

- The focus area is discussed and agreed with the preliminary committee.
- The major professor is identified and confirmed.
- The student is asked to prepare a statement of intent.

I would like to become a mountaineer.
Yes, that is a noble thing to do. Where would you like to climb?

2. Statement of Intent.
The student performs the desk research necessary to become familiar with the literature and other work in the focus area. Coursework continues to emphasize knowledge relevant to the subject area. The major professor expands the preliminary committee to include members likely to become the final Ph.D. committee.

The student prepares a written statement of intent which is presented to the expanded committee.

- The statement of intent is discussed and agreed with the expanded committee; the student's plan of studies is reviewed and additional coursework, if any, is identified.
- The student's Ph.D. committee is selected and confirmed.
- The student is asked to prepare a pre-proposal.

I have studied something about mountaineering.
The Himalayas look challenging, I would like to climb Everest.
Yes, that is a worthy goal. How would you go about it?
3. Pre-Proposal.
The student completes the research needed to develop a pre-proposal. The document must include at least the following items:

1. A statement of the proposed work.
3. A statement about the body of knowledge that will be affected.
4. A statement describing the contribution to the body of knowledge.
5. A review of other work and how the proposed work will be differentiated from other work.
6. A description of the proposed research methodology, the data and the fieldwork required.

A formal presentation of the pre-proposal is made to the full Ph.D. committee who make a commitment to the area of study while still allowing significant flexibility to the focus of the work. The student's plan of studies is reviewed.

- The committee discusses and agrees on the pre-proposal
- The committee approves student's plan of study with three possible options, a) approved, b) approved, subject to the results of the qualifying exam, or c) requiring specific additional coursework.
- The student is asked to undertake the qualifying exam.

This is how I would go about climbing Everest.
This is what I would achieve, these are the risks and rewards.
Yes, that all looks in order. Are you qualified to undertake the journey?

4. Qualifying Examination
The qualifying examination consists of two parts both of which must be satisfactorily completed.

Part 1. Breadth. All Ph.D. students are required to complete a one hour oral examination set by faculty in the Construction Engineering and Management Program to confirm their breadth of knowledge in Construction Engineering and Management. The material covered will include all aspects of coursework completed by the student.

Part 2. Depth. The intent of this portion of the qualifying exam is to determine competence in the specific areas of study required for the proposed work. The exam is prepared by each member of the Ph.D. committee, is at the discretion of the committee members and can be oral, written, or a combination of both.

The individual committee members report the results of the exam to the major professor. (An example memorandum and exam reporting form are given as attachments 1 and 2.)
Potential outcomes of the qualifying exam are as follows:

1. Acceptance of work done for both parts. The student may proceed.
2. Acceptance of the work done with recommendations for further study or further work. This does not require a retry at the qualifying exam but does require that a meeting is scheduled to review material and make changes in response to committee comments.
3. Review of the work done with a required retry at the qualifying exam. The date of the retry will be mutually agreed between the student and the committee. This would be the only possible retry; if a second failure is recorded, the student will be asked not to continue towards the Ph.D.

   Yes, I believe I have the ability to undertake the journey.
   Yes, we agree. Could you please develop a detailed plan for the expedition?

5. Proposal and Preliminary Examination.
   Upon satisfactory completion of the qualifying exam, the student will prepare a formal dissertation proposal and complete the preliminary exam. This is a Graduate School requirement and all Graduate School procedures must be followed. The preliminary exam consists of a presentation and defense of the dissertation proposal and ensures that the student is sufficiently prepared to embark on the proposed work. Potential outcomes of the preliminary exam are as follows:
   1. Acceptance of the proposal with approval of the area of work. The student may proceed but is required to keep the committee members aware of significant changes in direction of the work. The student should also seek assistance from the committee members throughout the dissertation.
   2. Acceptance of the proposal with recommendations for further study or further courses. This does not require a retry at the preliminary exam but does require that a meeting is scheduled to review changes made in response to committee comments.
   3. Review of the proposal with a required retry at the preliminary exam. This would be the only possible retry. Fifteen (15) weeks must pass before a second examination. If a second failure is recorded, the student will be asked not to continue towards the Ph.D.

   The student becomes a Ph.D. candidate after successful completion of the preliminary exam.

   Here are the detail plans for my expedition.
   I know we will encounter some problems but I am confident it will be a success.
   We agree, you have the ability, good luck, keep us informed, call if we can help.

6. Production.
   The student will now prepare the dissertation. Committee members will be kept informed on progress and direction of the work. When significant work has been reviewed by the major professor, the work will be submitted to committee members to solicit further comments.
Formal progress and update meetings with the committee will be arranged at least once per semester.

We are making progress towards the summit.
We agree, keep going, good luck, call if we can help.

7. Pre-defense.
After completion of the dissertation, the student will present the work to the committee for review and comment and will set a date for a pre-defense.

The pre-defense gives the committee an opportunity to provide comment and final input to the student regarding work which must be done prior to the final examination.
- The student takes note of the comments made and incorporates these into the final document.
- A date is set for the final examination.

I believe I have reached the summit.
We agree, but this will help the celebration.

8. Final Examination.
After incorporation of the comments made in the pre-defense and completion of the dissertation, the student will take the final exam. This is a Graduate School requirement and all Graduate School procedures must be met. The final exam will consist of a presentation and defense of the work done for the dissertation. The presentation will provide a general overview of the primary issues and solutions encountered during the preparation of the dissertation and will give a clear statement of the contribution made to the specific body of knowledge. Potential outcomes of the final exam are as follows:

1. The student passes with all members of the examining committee accepting the work as is or, if necessary, with minor changes. One dissenting vote is permitted.
2. The student achieves a conditional pass with recommendations made to improve the work in identified areas. The corrective work required typically will take three to fifteen working days after which the student will pass.
3. The student fails when more than one member of the examining committee rejects the work. The time restriction and one further retry are similar to those for the qualifying exam.

It should be noted that the student is required to present the final dissertation with all signatures within two weeks after completion of the final exam. If the work needed to complete minor changes will extend beyond this time, an extension can be requested at the discretion of the major professor. A formal request for an extension in time must be filed with the Graduate School prior to final submission.

I am on top of the world.
We all agree. Congratulations.