

GRADUATE PROGRAM IN ACOUSTICS
The Pennsylvania State University

Comprehensive Exam Part II:
Thesis/Dissertation Proposal Requirement Description
Revised 03/12/2013

I. Introduction

A thesis proposal states a problem to be investigated and describes how the research will be performed and reported. Approval of the Doctoral Committee signifies that it meets the standards of the Graduate Program in Acoustics for the degree desired. Therefore, the preparation and writing of the thesis/dissertation proposal are of utmost importance. Although the student is expected to seek guidance in the choice of topic and the method of solving the problem involved, responsibility for the proposal lies with the student who will, as far as possible, work independently and demonstrate the ability to plan and outline an acceptable research project. Adherence to the guidelines given below should assure the student that all information necessary for the satisfactory evaluation of the plans for research will be included in the proposal.

II. Format

The thesis proposal should present the required information as concisely and clearly as possible. The ability to describe concisely a research problem and methodology is one of the skills that the proposal process is designed to develop. Therefore, all thesis/dissertation proposals are limited in length to 15 or fewer double-spaced, numbered pages in a font size no smaller than 12 point. Proposals longer than this will not be accepted, however, appendices and references are not included in the 15-page limit. Proposals must contain the appropriate sections described in the Contents section of this Description on Thesis/Dissertation Proposals. An electronic copy of the proposal must be provided to permit distribution to the Graduate Program in Acoustics, Institutional Review Board or Institutional Animal Care and Use Committee if required (see Sec. III), advisor, thesis or doctoral committee, and the student.

III. Submission

Thesis proposals should be submitted before substantial research has been completed. The written proposal document must be submitted to the Graduate Program in Acoustics within 9 months of passing Part I of the Comprehensive Exam. The thesis proposal developed in fulfillment of the Comprehensive Exam Part II may be submitted at any time prior to the 9 month deadline following the Comprehensive Exam Part I and may be incorporated into the oral component of the Comprehensive Exam Part I at the discretion of the advisor and committee. Proposals that do not meet the format and standard of the Graduate Program in Acoustics will be returned to the student for revision and resubmission.

Research Involving Human Subjects, including the use of questionnaires to collect data, must also be approved by the University's Institutional Review Board (IRB) as meeting University and Federal guidelines. In such cases, the box provided on the *Thesis/Dissertation Proposal Approval Sheet* should be checked. An *IRB Policies, Guidelines, and Forms* are available at <http://www.research.psu.edu/orp/humans/policies/policies-and-guidelines>. Documentation of the IRB application submission must accompany the research proposal, even if final approval has

not yet been granted. This is an involved process with multiple opportunities to update information received as feedback during the Proposal Defense.

Research Involving Vertebrate Animals must be reviewed and approved by the Institutional Animal Care and Use Committee (IACUC). Penn State IACUC *Policies, Guidelines, and Forms* are available at <http://www.research.psu.edu/orp/animals>. Documentation of the IACUC application submission must accompany the research proposal, even if final approval has not yet been granted. This is an involved process with multiple opportunities to update information received as feedback during the Proposal Defense.

Research Involving Proprietary or Restricted Information should have a brief plan defining all data areas where restriction from publication in the thesis is likely. For example, if the thesis work is sponsored by a research contract (not a grant), explain how the proposed scientific execution plan avoids potential publication restriction from proprietary information claims of the sponsor or the US government. If the thesis proposal could create intellectual property, explain how this will be managed to avoid delay in thesis publication. If the thesis likely will not involve any proprietary or sensitive information, state so. The committee should be advised of any changes to potential data restrictions and of any potential intellectual property during the course of the thesis work.

IV. Contents

Thesis Proposals shall contain the following sections, presented in the order shown:

A. Title of the Study

This is the title as the student conceives it at the time the proposal is submitted. It should be no more than 100 characters in length. As the research develops, various rephrasings of the title may prove better suited to the work. In such cases, the most satisfactory one will be used for the thesis/dissertation document.

B. Statement of the Problem

Limit the statement, if possible, to two or three sentences, and note in precise language exactly what is to be investigated. To amplify the statement, it is usually desirable to list:

- The scope or limitations of the problem;
- Either one or more hypotheses the research seeks to test or the objectives expected will be attained as a result of the study. Major assumptions that underlie both the study as a whole and the methodology to be followed should be indicated.

C. Justification for and Significance of the Study

This section of the proposal includes:

- A brief statement of the reasons for the selection of the problem;
- The relation of the principal literature to the proposal;
- An explanation of the study's importance to the advancement of knowledge and its significance to the student.

The problem selected should be substantial enough to constitute a good example of a report of a scholarly investigation. Completion of a project or several unrelated projects does not satisfy this

requirement. At the Ph.D. level the work should constitute a significant increase in the pool of knowledge within the student's field of specialty.

D. Methodology or Procedures

This section describes the activities necessary to achieve the objectives. Methods should flow naturally from the problems and objectives, should include:

- A research design
- Location or setting in which the study will take place, calendar events in carrying out the study
- Sampling design and procedures
- Data collection schedule
- Brief description of instruments and tools for collecting data (validity, reliability, and pre-testing of the data collecting instruments)
- Definition of the most important terms and concepts
- Data processing procedures and procedures of data analysis as appropriate

E. Resources Required

The last part of the thesis proposal is a statement of the resources needed for the successful completion of the study and an indication of their accessibility to the student proposing to use them. Books, letters, manuscripts, raw data, technical reports, laboratory equipment, and existing and proposed measuring devices, as well as other facilities, are all possible aids to and resources for research and should be included as they pertain to the solution of the problem under investigation.

F. Literature Cited in the Proposal

The most persistent difficulty with thesis proposals is lack of evidence that a search of the literature took place in framing the problem to be studied. All efforts should be made by the students to locate all relevant research and refer to previous research appropriately throughout the proposal. All references should be listed in this section in a standard reference format typical of that found in journals in the student's primary field of research.

G. Oral Proposal Presentation and Defense

An oral proposal defense must be scheduled within 60 days of the submission of a thesis/dissertation proposal to the Graduate Program in Acoustics. The oral defense will consist of a 20-30 minute presentation on the proposal topic that may be open to the public at the discretion of the advisor and committee. Any general public will be dismissed at the conclusion of the presentation, and the student and committee will discuss the details of the thesis proposal. At the conclusion of the proposal discussion, a Proposal Approval Sheet will be completed to report the outcome of the defense.