



HOFSTRA NORTH SHORE - LIJ SCHOOL of MEDICINE PhD in The Molecular Basis of Medicine

The Dissertation

The graduate dissertation is the all-encompassing document describing original research carried out by the PhD student. The historical background, the scientific context of the experiments, and the data are presented and discussed extensively in the Dissertation. It is expected that the research carried out to generate the Dissertation will also result in published papers in recognized scientific journals, for which the student is the first author. Each chapter should indicate which publications (if any) are represented by the described work. At least one first-authored manuscript should be submitted for publication before a student may defend the dissertation. If a manuscript is not yet accepted for publication, a submitted draft must be appended to the dissertation, even if this draft ultimately requires additional experimental results. The manuscript should be written in the style of a specific (indicated) journal. A co-first authorship paper meets the requirement.

The Dissertation Defense

Every candidate for the PhD degree must submit a dissertation and pass an oral examination of his/her dissertation (dissertation defense) by the Dissertation Defense Committee (Committee, that consists of a minimum of three faculty members, one of whom is the designated Committee Chair, plus an examiner from outside the institution who has expertise in the area of the student's research.

The outside examiner should be selected by the mentor and his/her name and credentials submitted to the Program Director for approval prior to being invited to serve.

Scheduling of the Dissertation Defense

The Dissertation Seminar is usually scheduled immediately before the actual defense. This seminar fulfills a New York State requirement that a PhD candidate demonstrate the ability to present scientific material in public.

Instructions for Preparing the Dissertation



General Instructions

In general, successful dissertations range from 125 to 225 pages, but the number of pages can vary and may well be outside this range.

- i.) *Manual of Style:* Style, including capitalization, is not rigid, but the style selected should be adhered to strictly and consistently.
- ii.) *Line Spacing:* The text of the dissertation is to be double-spaced except for footnotes, figures, legends and bibliography, which are to be single-spaced.
- iii.) *Required Font:* Arial 11 pt., Helvetica 11 pt. or Times New Roman 12 pt.
- iv.) *Paper.* The final copies of the dissertation are to be printed on 8 1/2" x 11" high quality paper that is not punched or perforated in any way. Copies submitted to the Dissertation Defense Committee for review may be duplicated on standard photocopy paper and printed double-sided and secured using either a three-hole binder or a spring binder.
- v.) *Pagination:* Every page in a dissertation is assigned a number, which is typed on it.
- vi.) *Margins:* The margins at the top, bottom and right are to be 1.0 inch; the left-hand margin is to be 1.5 inches. All tables, charts and illustrations are to have left-hand margins of no less than 1.5 inches because of binding requirements. Any over-size material may be folded in from the right, top and bottom in such a way as to leave a 1.5 inch margin on the left side.
- vii.) *Spelling:* The spelling given in any standard American dictionary may be used. However, whatever forms are adopted should be adhered to consistently throughout the text of the dissertation.
- viii.) *Tables, Figures, Reproductions:* Tables, figures and all legends should be embedded in the document, as close to the relevant text as possible.

Tables are numbered consecutively throughout the dissertation. The word, "Table," followed by the appropriate Arabic numeral, is placed above the caption. Figures are numbered consecutively in Arabic numerals, with the word "Figure" and the appropriate numeral appearing before the caption. If possible, figures should be oriented in the "portrait" configuration. Submitted figures should be of sufficiently high resolution to be interpreted by the reader. Legends should be placed below the figure on the same page if space is sufficient, or on the following page to facilitate the reading of the dissertation.



- ix.) *References and Footnotes:* References to published articles within the text should be referred to in abbreviated form, (i.e. Student and Mentor, 1995; or Student et al., 1995). Every reference listed must appear in the bibliography (see below).

Dissertation Format

Two dissertation formats are accepted. Format A is the traditional organization of a dissertation. Format B is organized with some results included as chapters corresponding to a manuscript submitted or published as a journal article. The accepted dissertation formats are described below.

Format A

Introduction: The dissertation begins with a scholarly introduction (Chapter 1). This section should include a historical and well-referenced review of the area of research followed by a critical evaluation of the current status of the field. The student should then present the working hypotheses and give an introduction to the scientific question being addressed through the dissertation research.

Materials and Methods: The protocols and procedures used in the dissertation studies should be presented in sufficient detail to allow reproduction of the experiments (Chapter 2). A dissertation provides an appropriate vehicle for experimental details that might be omitted from journal articles due to space limitations. If the procedure was performed exactly as specified in an earlier publication, a brief statement of the procedure followed by a reference is adequate. The materials and methods section should have a section describing the statistical tests used for data evaluation.

Results and Discussion: Chapters 3 of the dissertation should each present the results of the conducted studies followed by a discussion of their significance. The format for these chapters should follow that of a highly respected scientific journal, mutually agreed upon by the student and the mentor. Data should be subjected to a statistical evaluation before conclusions are drawn.

Conclusions: The dissertation should end with a general discussion of the studies that have been conducted, including an assessment of the significance of the research, arguments of interpretation, evaluation of material included in appendices, and a plan for the experimental resolution of unanswered questions.

Format B

Introduction: The dissertation begins with a scholarly introduction (Chapter 1). This section



should include a historical review of the area of research followed by a critical evaluation of the current status of the field. The student should then present working hypotheses and give an introduction to the scientific question being addressed by the dissertation research.

Manuscripts: The body of the dissertation should be in the form of manuscripts that have been or are ready to be submitted for publication in a journal. Note that each and every chapter must adhere to the format and style requirements described above. Each manuscript will constitute a chapter and will include a brief Introduction.

Unpublished Data: A separate chapter(s) should be included for unpublished data. This chapter should use the same format as described for submitted manuscripts.

Conclusions: The dissertation should end with a general discussion of the studies that have been conducted, including an assessment of the significance of the research, arguments of interpretation, evaluation of material included in appendices, and a proposed plan for the experimental resolution of unanswered questions.

The following sections of the dissertation are common to both formats.

Title Page: The title is listed at the top of the title page. This is followed by the student's full name the full name and title of the dissertation advisor and, at the bottom, the statement: "Submitted in partial fulfillment of the requirements for the Degree of Doctor of Philosophy, The Graduate School of Hofstra North Shore - LIJ School of Medicine, New York (month and year)."

A sample page is shown at the end of this section which illustrates the format. The date given is not when the dissertation is submitted, but the day of the defense.

Abstract: The abstract of the dissertation is to include: the procedures followed, the significant results and the general conclusions. The abstract is to be presented on a separate page headed with the word ABSTRACT in capital letters centered on the page.

Acknowledgments: This feature is not required, but offers an opportunity to express the writer's appreciation to persons who have been especially helpful, to publishers of materials from which data have been drawn, and to whomever else acknowledgment should be given.

Table of Contents: The table of contents should list the chapters or other division headings of the dissertation, using the same words that appear in the body of the report. The numbers of the pages on which these items appear should also be given. The table of contents is to be followed by separate page listings for tables and for figures and



illustrations.

List of Abbreviations: All abbreviations used in the dissertation except for very standard abbreviations such as DNA or RNA should be listed, in alphabetical order.

Bibliography: The format for the references included in the bibliography should follow that in the suggested manual of style of a highly respected scientific journal. At a minimum, each reference must include the names of all authors, the title of the article, the name of the journal, the volume number and the pages of the article, and the year of publication. The bibliographies of the dissertation may be compiled together at the end of the dissertation, or compiled for each chapter separately.

Appendix: The appendix may include but is not limited to:

- Published papers
- Written permission from the copyright holders if copyright material (e.g. tables, charts, pictures, etc.) are included in the dissertation (required) -
- Submitted manuscripts
- Drafts of manuscripts expected to be submitted shortly
- Surveys of patient or other data
- High resolution figures
- Computer programs



Sample title page for doctoral dissertation

TITLE OF THE THESIS (IN ALL CAPS)

by

(Student Full Name)

(Mentor's Name), Mentor

Submitted in partial fulfillment of the requirements for the degree of
Doctor of Philosophy

The Graduate School of the Hofstra North Shore - LIJ School of Medicine
New York
Month, Year

Submission of the Dissertation

Presentation of the Dissertation to the Committee. The dissertation must be presented to all members of the Defense Committee at least two weeks before the scheduled defense. A member of the Committee may require a postponement of the dissertation defense if this requirement is not met. Within one week after the dissertation is delivered (i.e., one week prior to the defense) any Committee member may request a pre-defense meeting of the Committee if, in the opinion of the Committee member, the dissertation is not defensible.

Public Dissertation Seminar

The purpose of the public dissertation seminar is to provide a venue for the student to present his work in oral format to the scientific community. The seminar should be for no more than 50-55 minutes, leaving 5-10 minutes for questions by the community. Members of the committee should refrain from asking questions at this time.

Conduct of the Dissertation Defense

The purpose of the dissertation defense is to demonstrate in an oral form the knowledge and skills acquired to carry out research that provides new information on a significant problem. The dissertation seminar, whenever possible, should immediately precede the dissertation defense. The following are recommended guidelines for conducting the dissertation defense:

At the commencement of the defense, the student should be excused and the Chair (and/or mentor) will then provide a profile of the student's background, course work, and publication record. The Chair, in consultation with the examiners, will then determine how the dissertation defense will be conducted. If any of the examiners expresses a serious concern with the content of the dissertation, an approach should be developed whereby the questioning can address these concerns in a constructive manner. The student then will be asked to return, and the exam will commence.

The mentor is present during the defense, but is expected to not answer any questions directed to the student unless the examiners ask for clarification.

The Chair should ensure that the defense is conducted in a professional manner, and that each examiner has the opportunity to ask questions. The Chair also should ensure that the length of the exam is appropriate. A typical exam period is 1.5-2 hours.

After the Chair has determined that the defense is at an end, the student and mentor are both asked to leave the room. The defense is discussed, and vote for passage made by secret written ballot. The decision is determined by majority vote. Students may receive a grade of "Pass", "Conditional Pass," or "Fail.". If the vote is for "Pass," with minor revision of the dissertation requested, then the mentor is usually given the responsibility of checking the final document. If the vote is for "Conditional Pass," with major revision required, one or more members of the Committee are assigned to review and accept the corrections on behalf of the parent committee.

When the process is complete and the student earns a grade of "Pass," the members of the Committee sign the form acknowledging satisfactory completion of requirements for the degree.

A grade of "Conditional Pass" requires the student to complete additional work on the dissertation as set forth by the Committee. The report of the Committee will contain any recommendations for rectifying deficiencies if a grade of "Conditional Pass" has been given. Unless specified otherwise by the Committee, all deficiencies must be corrected within a period of three months of the date of the examination, and the revised dissertation submitted to the Chair of the Committee. If the deficiencies, which must be only those identified at the time of the original defense, are not corrected to the satisfaction of the Committee (or a designated subcommittee), or not completed within the three-month deadline, the grade of "Conditional Pass" will be changed to "Fail." The mentor may appeal for modification to the Program Director if he/she feels that the requirements for removal of a grade of "Conditional Pass" are not achievable by the student within the time frame set by the committee.

In the event of a grade of "Fail," re-examination is at the discretion of the student's Advisory Committee. Working together with the student and mentor, a written plan to address deficiencies for completion of the degree must be submitted to the Program Director. The grade of "Fail" may lead to dismissal from the PhD program. If a student disagrees, he/she can appeal to the Program Director, who may elect to appoint an ad hoc committee to investigate the matter and provide a recommend course of action.

Graduation Requirements

Dissertation Copies

No diploma will be granted until four copies of the final dissertation, printed on good quality paper in final form, are submitted by the student to the School of Medicine library

for binding. Bound copies of the dissertation will be distributed to the student, the student's advisor, the program Director, and the School of Medicine library. The student may provide unbound copies to the dissertation committee members.

Timeline for Completion of Graduation Requirements.

All corrected copies of the dissertation and any additional paperwork must be filed *within 3 months* after the successful dissertation defense. All coursework and other requirements must be completed at least three weeks prior to graduation.