

**MS in Clinical Investigation**  
**Preparing for your**  
**Master's Thesis and Graduation**

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## INTRODUCTION

This guide describes the requirements and guidelines governing the preparation of master's theses to be submitted to the Morningside Graduate School of Biomedical Sciences at the UMass Chan Medical School in partial fulfillment of the requirements for the master's degree. Described herein are the general requirements applicable to submitted theses and guidance on the arrangement, format, and submission of the student's thesis. Additionally, this guide details the policies governing the Master's Thesis and all policies pertaining to submission of the thesis to the Morningside Graduate School of Biomedical Sciences at UMass Chan.

Implicit in the generation of your thesis is that you prepare and present a well-written document that is free from error. The Morningside Graduate School of Biomedical Sciences requires that all students submit electronic versions of their thesis in pdf format. The text and any tables, figures, and graphics must be sufficiently clear, sharp, and large enough to be easily readable.

The regulations described here take precedence over previous publications issued by the Morningside Graduate School of Biomedical Sciences. In addition to submission and filing of your thesis, you must complete and submit all required forms which are available on the Morningside Graduate School of Biomedical Sciences website:

<https://www.umassmed.edu/gsbs/academic-student-affairs/resources--forms/forms/>

Questions you may have regarding the preparation of your thesis that are not addressed in this guide may be directed to the MSCI Program Director.

## **TIMELINE FOR COMPLETION AND GRADUATION – MASTER’S DEGREE**

### **Thesis Advisory and Readers Selected**

The Master's thesis advisor provides ongoing supervision and consultation for conceptualization, design, conduct, analysis and interpretation of the research project. The selection of a thesis advisor is usually informed by the topic a student wishes to pursue. The thesis advisor must have a faculty appointment in the Morningside Graduate School of Biomedical Sciences. In addition to the thesis advisor, the student must select two readers from among the Morningside Graduate School of Biomedical Sciences faculty. The advisor and two readers must be identified, and the student schedules the initial meeting as soon as the student has selected a topic. This must occur no later than the beginning of the first, second, or third semester for those completing the degree in one year, 18 months, or two years, respectively. During this meeting, the student presents the study aim, the background literature, rationale, and data resources to be used for the thesis. The committee provides input regarding the feasibility of the research, often suggests modifications to the study aim, and clarifies roles and expectations of the thesis advisor and two readers. During this meeting, the date and time for the thesis proposal presentation is set for later in the semester. The thesis proposal presentation includes a 15–20-minute presentation of the study aim, background, detailed methods, and analytic approach. Refinements to the approach may be made based on feedback from the thesis advisor and the two readers. The thesis advisor, with input from the readers, determines the point at which the student has successfully completed the stated research project.

### **Thesis Presentation/Seminar Notification**

As part of the thesis process, all students orally present the completed project. This is scheduled with the Morningside Graduate School. The Morningside Graduate School of Biomedical Sciences Office should receive the notification at least 20 days prior to defense/seminar to provide sufficient time for posting. The thesis defense must be posted 15 days prior to the exam date. The written version of the thesis must be formatted and sent to the committee at least a week before the presentation. The student and committee may collectively decide to incorporate comments offered during the oral presentation.

### **Submission of Thesis to the Graduate School**

Following the oral presentation, the student has up to 21 days to complete edits to their thesis dissertation. Extensions are at the discretion of the Dean.

## GRADUATION – REQUIRED DOCUMENTS

The student must have met all requirements for graduation, successfully presented their thesis, and submitted the following to the Morningside Graduate School of Biomedical Sciences Office by the following submission dates:

- Selection of Thesis Advisor and Readers (MSCI18)
- Thesis Proposal Presentation (MSCI04)
- Request for Notice of MSCI Thesis Presentation (MSCI17)
- Master's Thesis Completion Form (MSCI08)
- Graduation Check-out (GSBS20)
- eScholarship Permission Letter (GSBS19)
- Commencement and Graduation Information (ONLINE - GSBS21)
- Submission of final, revised dissertation to eScholarship.

## GRADUATION DATES & FINAL SUBMISSION DATES

Graduation Dates	Final Submission Dates
December 31 <sup>st</sup>	December 30 <sup>th</sup>
March 31 <sup>st</sup>	March 30 <sup>th</sup>
First Sunday in June	May 1 <sup>st</sup>
Aug 31 <sup>st</sup>	August 30 <sup>th</sup>

## **THESIS PUBLICATION**

### **Submission of Thesis for Publication**

Upon completion, the thesis is submitted to the Morningside Graduate School of Biomedical Sciences Office for the Dean's signature and publication. The thesis will be published using electronic media.

## **SAMPLE TITLE PAGE – FORMATTING FOR THE TITLE PAGE**

This format must be used, or your dissertation will not receive final signature from the Dean.

TITLE (IN CAPITAL LETTERS)

A Master's Thesis Presented

By

(NAME IN FULL)

Submitted to the Faculty of the  
Morningside Graduate School of Biomedical Sciences at UMass Chan Medical School  
in partial fulfillment of the requirements for the degree of

MASTER OF SCIENCE IN CLINICAL INVESTIGATION

(MONTH, DAY AND YEAR)

(MAJOR SUBJECT)

# **SAMPLE SIGNATURE PAGE – FORMATTING FOR THE SIGNATURE PAGE**

This format must be used, or your dissertation will not receive final signature from the Dean.

TITLE (IN CAPITAL LETTERS)

A Master's Thesis Presented

By

(NAME IN FULL)

The signatures below signify  
completion and approval as to style and content of the Thesis

(Signature)

(Name Typed), Thesis Advisor

(Signature)

(Name Typed), Reader

(Signature)

(Name Typed), Reader

The signature of the Dean of the Graduate School of Biomedical Sciences signifies that the student has met all master's degree graduation requirements of the school.

(Signature)

Mary Ellen Lane, Ph.D.,  
Dean of the Morningside Graduate School of Biomedical Sciences

Month, Day and Year  
(Typed)



## **CONTENTS AND ARRANGEMENT**

The arrangement and construction of a thesis manuscript may vary depending on the specific topic of research and stylistic approaches of the author. Generally, the content of a thesis should include a body of work which displays original scholarship, expressed in literate style, and possessing a distinct contribution to a particular field of study. Your thesis may include both published as well as unpublished original materials and should clearly convey all areas of your studies that demonstrate original scholarship and an advancement of knowledge in the domains in which your research was conducted. This thesis, when completed, will constitute a published work, and as such, should be prepared accordingly.

The following are guidelines concerning the organization of the manuscript proper. They should be taken as a basis for thesis preparation from which deviations may be made under the guidance of your Thesis Advisor or MSCI Program Director.

### **Document Divisions**

The thesis consists of three major sections which are described below:

1. Front matter
2. Body matter
3. Back matter

### **Front Matter**

#### **Title Page**

The title page should be written to conform to the standard thesis title page adopted by the Morningside Graduate School of Biomedical Sciences which is presented in the example Sample Title Page (P. 7).

#### **Signature Page**

The signature page should include the complete title of your thesis, the list of your thesis advisor and two readers (providing space for signatures), and the Dean of the Morningside Graduate School of Biomedical Sciences, followed by your program affiliation and the date. You will find an example of this here: Sample Signature Page (P. 8). Dedication (optional)

If you wish, you may include a brief dedication section here.

### **Acknowledgements**

This section is customarily used to provide acknowledgement to those individuals or groups of influence relevant to the execution and completion of your thesis work.

### **Abstract**

This section should provide a concise summary of the entire body of work contained in your thesis. This relatively short section should contain elements that introduce the rationale for your research, summarize relevant and noteworthy findings and conclude with how the work advances the knowledge in your field of study. Suggested length of a structured abstract (e.g., background, methods, results, conclusions) is approximately 150 words or less for theses.

### **Table of Contents**

Your table of contents should include all front, body and back matter contained in the thesis excluding the cover page.

### **List of Tables**

This should summarize all tables contained in the thesis as indicated by table number and the title of each table.

### **List of Figures**

This should summarize all figures contained in the thesis as indicated by figure number and the title of each figure.

### **List of Third Party Copyrighted Material**

This should summarize all material (Figures, Tables etc) created by a third party (published and unpublished) that are included in the thesis. This list should include the Figure or Table number, the publisher or author and the permission to use the material (license number) granted by the publisher.

### **List of Symbols, Abbreviations or Nomenclature (optional)**

This is an optional section which may be included to summarize frequently used symbols, abbreviations or acronyms, as well as nomenclature that is specific to your field (that may not be immediately identified or understood by those who are outside the specific field of study).

### **List of Multimedia Objects or Files (optional)**

This section will be necessary should you choose to include references to various types of multimedia in your thesis. Examples of these might include original video clips, sound recordings, or files that are not easily adapted for inclusion in the final printed copy of the thesis.

### **Preface**

This section normally includes references to publications that represent the work contained within the thesis and/or may mention work performed during thesis studies that will not be presented in the thesis. Additionally, this section should be used to identify explicitly any portions of the text, tables, figures or materials that were not directly generated by the author and thus should reference the sources of such materials. It is expected that any non-original materials (i.e., originating from co-authored works) would be included with the consent of those who generated them and that such inclusions would not constitute a large part of the thesis body (see below).

### **Body Matter**

The body of the thesis is that section which presents the Introduction, Methods, Results, Discussion, and Conclusions. This section is divided into chapters, the first of which should be the thesis introduction. Subsequent chapters of the thesis body should present the methods, results, discussion, and conclusions. In most cases, such separations might be obvious in the form of published or unpublished manuscripts, each of which could constitute a separate chapter in the body matter.

As manuscripts for publication are frequently very concise documents written in distinct styles, where appropriate, the manuscript may be expanded to include additional material in sufficient detail to allow a clear and precise judgment to be made of the importance and originality of the research reported in the thesis.

In general, when co-authored papers are included in a thesis, the student must have made a substantial contribution to such bodies of research. In addition, the student is required to make an explicit statement in the thesis as to who contributed to such work and to what extent. This statement should appear in the preface to the thesis.

## Back Matter

### Appendices (optional)

This is an optional section that may be included to present additional findings of a separable nature to that of the research chapters, which may not constitute an additional chapter. Also, this section may include material that cannot be included within the overall topic of the thesis but may include findings that have contributed largely to the thesis research.

### Bibliography

This section should format all referenced materials contained within the thesis into a concise listing at the end of the document. The format of this bibliography is at the discretion of the author and committee and usually follows the format which is most common in the journals of the field. Whenever possible, citation software such as *EndNote*® or *ReferenceManager*® should be used to manage references and to aid in building the works cited section. These software packages facilitate easy search, download and organization features for large citation databases (e.g., from PubMed citations) and have automated bibliographic construction features that can conform to most accepted journal formats.

## GENERAL FORMATTING

**Fonts:** The preferred font size is 12 in either the Times New Roman or Arial styles. If necessary, different typefaces (font sizes or styles) may be used within headings, tables, figures, and appendices. Non-standard typefaces, such as script, are generally not acceptable (excluding commonly accepted symbols).

**Line Spacing and Margins:** All main text should be double spaced (3 lines per vertical inch). Single spaced lines may be used for certain sections of the thesis including the table of contents, tables, figure legends, long quotations, footnotes, and bibliographical citations. Margins must be at least 1 1/2 inches wide at the top and left, and 1 inch wide at the bottom and right. Illustrations, tables and figures should conform to these margins as well. The spacing and placement of footnotes throughout the text should be consistent and conform to margin constraints.

**Page Numbering:** The pages preceding Chapter I should be numbered consecutively in small Roman numerals. The cover page should be considered page “i” but should not be numbered, nor should the title page be numbered (as “ii”). Beginning with the first page of Chapter I and continuing through the bibliography or appendix, pages should be numbered consecutively in Arabic numerals. The numbers should appear in the upper right corner of the page, flush with the upper margin and should not be followed by a period. Chapters should be numbered in Roman numerals consecutively throughout the Thesis, with the word “CHAPTER” used as part of the designation followed by the Roman numeral. This heading should be centered near the top of the page.

**Headings:** Chapters should be designated throughout the thesis with the word “CHAPTER” used as part of the heading followed by consecutive Roman numerals. This heading should be centered near the top of the page. Headings for main divisions within a chapter should be centered but should have only the first letter of the principle words capitalized. Subdivisions within the main divisions should be indicated by side heads.

**Footnotes:** Footnotes should be numbered consecutively throughout the thesis. The place in the text at which a footnote is introduced should be marked with an Arabic numeral in superscript at the end of the sentence, and after punctuation, if any. The footnote should be placed at the bottom of the same page to which the reference is made in the text. The footnote should be single spaced and separated from the main text of the page by a solid line. Footnote text may have reduced font size (9-10).

**Tables and Figures:** The word "Table" designates tabulated numerical data or text used in the body of the thesis and in the appendices. Tables consist of an arrangement of facts, figures, and values in an orderly sequence usually in rows or columns. The word "Figure" designates all other nonverbal material used in the body of the thesis and in the appendices, such as charts, graphs, maps, photographs, plates, drawings, and diagrams. Headings for tables and figures should use the words "Table" or "Figure" followed by Arabic numerals and should be numbered consecutively. Usually, tables and figures are numbered according to the chapter number followed by a decimal followed by consecutive numbering beginning with 1 (e.g., Table 3.1 denotes chapter 3, table 1). Consecutive numbering for tables and figures is reset at the start of each new chapter. Placement of tables and figures should occur within each chapter on separate pages immediately following the chapter text which refers to them. All tables and figures should be accompanied by legends describing each section of the table or figure (see list of tables and list of figures). These should have headings identical to that of the coordinate table or figure followed by the title of the table or figure. The legend page should immediately precede the table or figure page and in all cases be oriented so that both the legend and table or figure can be read simultaneously (printed sides facing each other). These imbedded pages should conform to the regular consecutive page numbering of the chapter and should not simply be inserted without numbering.

**Third party copyrighted matter:** The student should obtain permission (preferably written), from the owner(s) of each third party copyrighted material to be included in his/her dissertation. If the student has taken text from a third party, referencing the source(s) is sufficient. If the student is using an image, table, chart, or material that has been published, he/she should obtain written permission from the publisher. This will typically include a license number (see below). If this is not possible, i.e. the author or publisher cannot be contacted or does not respond, the student must give full attribution to the author. If unpublished material created by an author is included, the student must obtain permission (in writing) from the author and full attribution must be given.

Third party copyrighted material and permission to use this material should be listed in the Front Matter (see page 9). Examples are included below.

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Figure Number	Publisher	License Number
Figure 1-2	Nature Publishing Group	2330811110362

**The following figures were reproduced from journals: No permission required**

Figure Number	Publisher
Figure 1-1	Theoretical Biology and Biophysics Group, Los Alamos National Laboratory

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