University of Puerto Rico
Medical Sciences Campus
School of Pharmacy
Graduate Program

Guidelines For The Academic Graduate Program
Leading Towards The Degree of Master of Science in Pharmacy

Prepared by the Graduate Committee
(1997)

Revised by the Graduate Committee
(2005-2006)
Approved by the Faculty:
June 20, 2007
I. Introduction

This document includes the Guidelines for the Academic Graduate Program at the University of Puerto Rico, School of Pharmacy, leading towards the degree of Master of Science in Pharmacy.

The regulations herein contained are written for the purpose of providing uniform minimum requirements for the academic graduate program leading towards the degree of Master of Science in Pharmacy.

The following is an outline of a sequence of steps through the academic program. Details of each step are found in this document and in the Academic Proposal for Master of Science in Pharmacy as indicated by the cross-reference in parentheses following each requirement.

1. Admission as a regular, special or conditional student (see Admission Requirements and Categories, Appendix D2, pp. 78-79).

2. Submission of student academic progress report by the Assistant Dean to the Graduate Committee at the end of each trimester (see Appendix D2, Pág. 87).

3. Selection of Major Advisor after completion of 12 credits hours (see Appendix D2, p.87).

4. Completion of coursework under the guidance of a Major Advisor (see Appendix D and Appendix D2, p.87).

5. Selection of Advisory Committee after completion of 12 credits hours followed by Graduate Committee approval (see Appendix D2, p.87).

6. Submission of a Research Proposal to the Advisory Committee for approval before completion of 20 credit hours (see Appendix D2, p.88).

7. Evaluation of research progress by the Advisory Committee, once every six months (see Appendix D2, p.87).

8. Completion of research and writing of thesis under the direction of the Major Advisor, subsequently approved by the Advisory Committee.

9. Thesis defense and oral examination- The student must defend the quality of the research, the quality of the written thesis and his/her competence in the
thesis field. (see Appendix D2, p.88). This oral examination must be approved by the Student’s Advisory Committee.

10. Compliance with all the requirements towards the degree.

II. The Candidacy

A. Definition

1. A candidate for a degree is a student who has satisfied the requirements set forth by the Faculty of the School of Pharmacy, University of Puerto Rico, in the *Academic Proposal for Master of Science in Pharmacy* (see Appendix D: Norms and Procedures for the Master of Science in Pharmacy Program). This is certified by the Graduate Committee upon recommendation from the student’s Advisory Committee through his/her Major Advisor.

B. Requirement for Candidacy

1. The minimum requirements for the degree of Master of Science in Pharmacy consist of:

   a. Satisfactory completion of 40 credit hours within five consecutive years from the initial date of admission (registration) to the program (Appendix A).

   b. Overall grade point average of 3.00 (scale of 4.00) in graduate courses. A minimum passing grade of “C” is required in all courses.

   c. Completion of a thesis based on an original investigation under the guidance of an Advisory Committee.

   d. Satisfactory completion of a thesis defense and final oral examination.

   e. Satisfactory completion of any other requirements specified by the Graduate Committee (See Master Proposal).

   f. If necessary, it is possible to apply for an extension of time (Appendix B).
C. Certification Procedure

1. Assistant Dean of Graduate Program must check to ascertain that the student has met all requirements for candidacy.

2. Assistant Dean of Graduate Program should send to the Graduate Committee a letter certifying that the student has fulfilled the requirements for the degree of Master of Science in Pharmacy.

3. The Graduate Committee will submit to the Assistant Dean its recommendations concerning students who have completed all the program’s requirements and are eligible to be awarded the Master of Science in Pharmacy degree. The Assistant Dean will then submit his/her recommendation to the Faculty of the School of Pharmacy who will then submit their decision to the Medical Sciences Campus Register.

III. The Thesis Research Proposal

A. Selection of Major Advisor

1. The student is responsible for nominating a properly qualified Major Advisor. Qualifications are found in Appendix C. The prospective Advisor’s name, along with the prospective Advisor’s written consent to accept the student must be provided to the Graduate Committee.

2. Substitution of Major Advisor

a. The Graduate Committee may approve a change of the Major Advisor upon written request submitted by the student and signed by the Major Advisor. The Graduate Committee acts as the final authority concerning Major Advisor changes.

b. Any proposed Major Advisor must meet the qualifications specified in Appendix C.

c. A different research project must be undertaken when the Major Advisor is changed.
3. Special cases

When the Major Advisor leaves or is transferred to another institution, the student must select another Major Advisor or a Co-advisor from the School of Pharmacy.

B. Selection of Advisory Committee

1. The student, with the consent of his/her Major Advisor, shall nominate the Advisory Committee members. The qualifications for serving as an Advisory Committee member are listed in Appendix C.

2. The student is required to have a minimum of three (3) Advisory Committee members, including the student’s Major Advisor who will act as the chairperson of the Committee.

3. The Graduate Committee must be notified in writing of the proposed members of the Advisory Committee (Appendix D). The Advisory Committee becomes official upon approval by the Graduate Committee (see Appendix D2 in the Academic Proposal for Master of Science in Pharmacy, p.87).

4. Substitution of Advisory Committee Members

The Graduate Committee may approve a change in the Student’s Advisory Committee upon written request submitted by the student and signed by the Major Advisor.

C. Content of Thesis Research Proposal

1. All the students enrolled in the University of Puerto Rico School of Pharmacy Graduate Program must submit a research proposal to the student’s Advisory Committee before the completion of 20 credit hours (see Academic Proposal for Master of Science in Pharmacy, Appendix D2, p.88).

2. Definition

The Research Proposal is a statement of the subject and intent of the research the student wishes to undertake. The Proposal must be based on scientific principles and it is intended as a preliminary outline of research leading to an original contribution to the scientific literature.
3. Preparation

In order to avoid extensive revisions and unnecessary delays, the student should consult with his/her Major Advisor and the Advisory Committee in the preparation of the Research Proposal.

4. Approval of Research Proposal

a. The student must obtain the approval of the Major Advisor prior to submitting the Research Proposal to the other members of the Advisory Committee.

b. The student’s Advisory Committee is responsible for final approval of the Research Proposal (no defense). A copy of the approved Research Proposal signed by the members of the student’s Advisory Committee should be sent to the Graduate Committee.

5. Research Funds

The student, through his advisor, may request research funds from pharmaceutical companies, philanthropic organizations, and federal or local programs (including the Graduate Program) but only after the Research Proposal has been approved by the Advisory Committee through the Office of External Resources of the Medical Sciences Campus.

IV. Thesis Research

A. Student Responsibilities

1. The student is entirely responsible for his/her thesis research, maintenance of adequate research notes, and the security of such notes.

2. The student should discuss the ongoing research with his/her Major Advisor and Advisory Committee members regularly (see Appendix D2 of the Academic Proposal for Master of Science in Pharmacy, p.87).

3. The student should conduct himself/herself in a professional and ethical manner.
B. Major Advisor Responsibilities

1. The Major Advisor’s principal responsibility is to supervise the student’s research, create an environment of academic excellence and to encourage critical thinking (Appendix C).

2. The Major Advisor is responsible for calling an Advisory Committee meeting at least once every six months to evaluate the student’s progress. The student and the Major Advisor will prepare, in consultation with the Advisory Committee, a brief written progress report that will be sent to the Program’s Office for filing in the student’s permanent record (Appendix E).

C. Advisory Committee Member’s Responsibilities

1. The members have the responsibility to advise the student in his/her research (Appendix C).

2. The members must attend Advisory Committee meetings and be present in the thesis defense.

D. Credit for Master’s Research Course and Thesis

1. Four (4) credits in Master’s Research course are required for the Master’s degree. The four credits must be taken under the supervision of the Major Advisor that will certify completion of the research in which the thesis is based. Based after the four trimester credits, the student may enroll, as needed, in research without credit.

2. A student may enroll in Master’s Research only after his/her Research Proposal has been approved by his/her Advisory Committee and he/she has completed twenty (20) credits.

3. When the student enrolls for research credit, each trimester he/she is obligated to satisfy the hourly requirements for the research credit he/she will receive. A grade will be given by the Major Advisor upon completion of research.
V. Preparation of the Dissertation

A. Style

1. The style of the dissertation shall follow the guidelines set forth in the latest edition of *A Manual of Style* published by the University of Chicago Press. The thesis must be neat, free from typographical errors, and conform to accepted scientific standards.

B. General Format

1. Title Page

   a. The title of the thesis should be a meaningful description of the content of the thesis.

   b. The title of the thesis shall be in capital letters on the center of the page. Following the title shall be the author’s full name. Following the author’s name, the following thesis statement must appear: “A Thesis Submitted in Partial Fulfillment of the Requirements for the Degree of Master of Science in Pharmacy at the University of Puerto Rico Medical Sciences Campus 20XX”. At the lower right one-third of the page shall be the Advisory Committee composition. This shall include the name, degree, academic rank, and department of each of the Advisory Committee members, with the Major Advisory (s) listed first and the other members listed in alphabetical order. For non-academic members the equivalent in formation such as: position, division and institution or company, must be included as well.

2. Acknowledgements

   a. The acknowledgement is an optional brief statement of appreciation or recognition of special assistance.

   b. The heading ACKNOWLEDGEMENT, in capital letters, is centered, without punctuation, two inches from the top of the page. The text begins four spaces below.
3. **Table of Contents**

   a. The Table of Contents is a listing of all the parts, sections, or chapters, and their principal subdivisions of the thesis.

   b. The heading TABLE OF CONTENTS, in capital letters, is centered, without punctuation, two inches from the top of the page. The listing begins at the left-hand margin, four spaces below the heading.

   c. All material following the Table of Contents is listed in it. No preceding material is listed.

4. **List of Tables**

   a. The List of Tables is a listing of all the tables contained in the thesis. It uses exactly the same numbers and captions as appear above the tables in the text or in the appendices.

   b. The heading LIST OF TABLES, in capital letters, is centered, without punctuation two inches from the top of the page. The listing begins at the left-hand margin four spaces below the heading.

5. **List of Figures**

   a. The List of Figures is a listing of all the figures contained in the thesis. It uses exactly the same numbers and captions as appear below the figures in the text or in the appendices.

   b. The heading LIST OF FIGURES, in capital letters, is centered, without punctuation two inches from the top of the page. The listing begins at the left-hand margin four spaces below the heading.

6. **List of Symbols, Abbreviation, Nomenclature, Glossary**

   If needed in the thesis, these lists appear after the List of Tables and Figures.

7. **Abstract**

   a. The heading ABSTRACT, in capital letters, is centered, without punctuation two inches from the top of the page. The first paragraph begins at the left-hand margin four spaces below the heading.
b. The first paragraph is single-spaced and is flush with the left-names first, the abbreviation of the degree, the name of the institution granting the degree, the month and the year the degree is obtained, the title of the thesis, and the name and academic rank of the Major Advisor.

c. Follow this first paragraph with a double-spaced summary of the most important findings of the student’s research. The maximum length of the Abstract is 200 words.

8. The Text

a. Internal organization of the text into parts, sections, or chapters is up to the student and his/her Major Advisor. For every part, the heading must be in capital letters and centered without punctuation two inches from the top of the page. The text must begin four spaces below the heading.

b. Sample

INTRODUCTION

MATERIALS AND METHODS

See Appendix E

RESULTS

DISCUSSION

CONCLUSIONS

APPENDICES

BIBLIOGRAPHY

C. Specific Dissertation Requirements

1. Paper

a. The final dissertation copy must be typed on 8 1/2 x 11 inch white bond paper of 100 percent cotton and a weight of at least 20-25 pounds.
2. Preparation of Manuscript

a. Typing: The thesis must be printed using a good quality laser jet. Acceptable font size 12 and types Arial or Times New Roman can be used.

b. Spacing: The written text of the thesis must be double-spaced for clarity. Long tables and quotations, footnotes, notes and multi-line captions must be double-spaced. The Bibliography must be double-space between entries and single-space within entries.

c. Margins: The left-hand margin of each page must be at least 1 ½ inch. All other margins must be at least 1 inch wide.

d. Page Numbering: Page numbers are placed without punctuation ½ inch from the top right corner of each page with the last digit even with the right-hand margin. All the pages preceding the beginning of the text are sequentially numbered in roman numerals. The title page must not be numbered but it is considered to be roman numeral one (I). The pages following the beginning of the text are numbered sequentially in arabic numerals.

e. Notes and Footnotes: The use of notes and footnotes should be avoided throughout the thesis. If necessary, these should be done according to the current practices of the student’s field of study.

f. References: All references to the literature made in the text should be listed at the end of the dissertation under the category of BIBLIOGRAPHY. The presentation of this section of the thesis is up to the student and his/her Major Advisor, but must include the title of the article.

3. Tables and Figures

a. All tables and figures must have a title and a legend if necessary. They must be numbered sequentially in the text using arabic numbers and must follow the prescribed margins.

b. Tables and figures of half-page or less of length may appear on the same page with the text above and below by triple spacing.
D. Responsibilities

1. The Student

The student is responsible for writing the dissertation according to the above criteria. He/She should consult frequently with the Major Advisor and the Advisory Committee members concerning details of the thesis writing. The student has the ultimate responsibility to guarantee that the thesis is acceptable as a properly written scientific document.

2. The Major Advisor

The Major Advisor shares almost equal responsibility with the student in terms of the quality of the writing of the dissertation. The Major Advisor must proof-read the dissertation and must approve the document before it is circulated among the other Advisory Committee Members. The Advisor will act as an arbitrator in disputes concerning the content of the thesis.

3. The Advisory Committee Members

The Advisory Committee Members have the responsibility of reading and commenting in a constructive manner on the dissertation.

4. Student and Major Advisor

The student and the Major Advisor must see that the dissertation is prepared, proof-read and circulated among the Advisory Committee Members. For the first draft, at least one copy of the dissertation must be given to each member. Once the dissertation has been approved in its final form (including minor corrections following the oral defense of the thesis), at least four bound copies and two originals are required. (See VI-D1)

VI. The Thesis Defense

A. Preliminary Requirements

1. The student must provide his/her Major Advisor and Advisory Committee members a legible copy of the thesis at least eight (8) calendar weeks prior to the scheduled defense of the thesis.
2. The Major Advisor and Committee members will have four (4) calendar weeks to complete the reading and return written criticisms of the thesis to the student.

B. **Preparation for the Oral Defense of the Thesis**

The student will correct the thesis based on the criticisms received from the readers and submit it to the Advisory Committee for approval.

1. **The Student**

   Each student must defend his/her thesis and demonstrate an acceptable knowledge in the general thesis field via an oral examination conducted by the student’s Advisory Committee.

2. **Advisory Committee**

   The examiners are the Advisory Committee members. They should ascertain whether the student is qualified to receive a degree from the University of Puerto Rico. At least three members of the Advisory Committee must attend the oral defense of the thesis and are required to examine the student in order to determine the above qualification.

C. **Conduct of the Thesis Defense and Oral Examination**

1. The Major Advisor will present the student to the audience.

2. The student will present a short summary of his/her research to those present which should not exceed sixty (60) minutes.

3. Following the presentation, the Assistant Dean will ask for questions from the audience at large. The examiners may also participate if they wish to do so.

4. Following the general questioning period, the Assistant Dean will request that guests leave the examination room. At this time, the student and the examiners will meet and further discuss the thesis.

5. When the Major Advisor and the Advisory Committee are satisfied that the student has been adequately examined, he/she will ask the student to leave the room.
6. The examiners will then meet in closed session to discuss the outcome of the oral defense. The examiners will then vote on the outcome of the defense. Each examiner, including the Major Advisor has one vote. A majority vote will constitute the decision of the examiners.

7. Each member of the Advisory Committee shall sign the report which will constitute successful completion of the oral examination by the student and approval of the thesis dissertation. If minor corrections to the thesis are required, the Major Advisor will withhold his/her signature until such corrections are completed by the student. Upon signing the final successful report, the Advisory Committee is certifying and recommending to the Graduate Committee that the student be awarded the degree of Master of Science in Pharmacy. If the defense is successful and the dissertation is complete to the satisfaction of the examiners, then the Assistant Dean will prepare a report of the outcome of the defense to be given to the Graduate Committee.

8. If the thesis defense is not successful or if the dissertation is still incomplete or unacceptable, the majority vote of the examiners should state these facts in a written report to the Graduate Committee written by the Major Advisor. Each of the examiners must sign this report. The Advisory Committee must also develop a corrective plan based on the particular thesis or student’s deficiencies.

9. A student who fails the final oral defense of the thesis may present his/her dissertation for re-examination. The student will be allowed a maximum of two attempts to pass the thesis defense and final examination.

D. Final Thesis Requirements

1. At least four (4) bound copies and two (2) originals of the thesis in its final form (after corrections are made) should be submitted to the Graduate Program within 60 days calendar from the date of the defense. This condition should be satisfied in order to receive the degree. The copies plus the originals will be distributed as follows:

   a. One original for the Medical Sciences Campus Library.

   b. One original for the student.
c. A copy for the student’s Major Advisor.
d. A copy for the Graduate Program.
e. A copy to each member of the Advisory Committee.

2. If the student does not provide the bound copies, the student should defend again and will not receive the degree.

3. The School of Pharmacy will certify that the student has fulfilled all the requirements to obtain the degree of Master of Science in Pharmacy upon receiving the original and copies of the thesis.
APPENDIX A

GRADUATE PROGRAM TIME LIMITS AND COURSE EXPIRATION
GRADUATE PROGRAM TIME LIMITS AND COURSE EXPIRATION

A. The time limit for the completion of forty (40) credit hours is five (5) consecutive years upon the initial date of admission (registration) to the program. The date used for calculating the time limits is the date of admission as a regular student. This information will be provided in the admission letter.

B. The thesis defense should be held no later than five (5) years after the date of admission.

   1. If the Master’s thesis is rejected, it must be resubmitted for a final defense within one (1) year after the first defense.

   2. The student should complete the time schedule for processing thesis to his Major Advisor.

C. At the end of the fifth year after admission, the student will receive a letter notifying that if more time is needed to complete the work, he/she can apply for an extension of time with the Major Advisor approval; including the working plan from the Graduate Committee (see Appendix E).

D. The Assistant Dean of the Graduate Program shall be responsible for keeping a list of the deadlines of all students and their progress. This information will be provided to the Graduate Committee through the Assistant Dean.

E. The required or core courses will expire six years after they have been taken for the first time.

F. The elective courses will expire ten years after they have been taken.
APPENDIX B

GRADUATE PROGRAM EXTENSION OF TIME FORM
APPENDIX B

University of Puerto Rico
Medical Sciences Campus
School of Pharmacy
Graduate Program

GRADUATE PROGRAM
EXTENSION OF TIME FORM

Name: ____________________________________________________________

Date of Admission to the Graduate Program: _________________________

Option: __________________________________________________________

Reason(s) for extension of time:

________________________________________________________________
________________________________________________________________
________________________________________________________________
________________________________________________________________

Working Plan: ____________________________________________________

__________________________________________
Major Advisor
APPENDIX C

QUALIFICATIONS AND RESPONSIBILITIES OF ADVISORY COMMITTEE MEMBERS
Qualifications and Responsibilities of Advisory Committee Members

I. Qualifications

A. Purpose of Qualifications

1. The qualifications set the minimum acceptable standards necessary to serve on Advisory Committees.

2. The primary function of an Advisory Committee member is to judge the quality of the research work and the ability of the student to defend it.

3. An auxiliary function is to provide guidance for the student during his/her thesis research.

B. Certification of Advisory Committee Members

1. The Graduate Committee acts as the final authority in certifying the qualifications of any proposed Advisory Committee member.

C. General Qualifications for Advisory Committee Members

1. An Advisory Committee member must;

   a. Have a Master of Science (M.S.), Doctor of Philosophy (Ph.D.) or a Professional Doctoral degree.

   b. Be a member of the faculty of any accredited institution of higher learning, or an acknowledged expert in the student’s research area.
2. In addition must have at least one of the following criteria:

   a. Active involvement in scientific research for at least one (1) year prior to nomination, and at the time of nomination.

   b. The equivalent of five (5) years research experience. Two of these five years may have been devoted to research toward the Master of Science (M.S.), or Doctor of Philosophy (Ph.D.) degree, or their equivalent.

   c. Publication of at least three (3) papers in peer reviewed scientific journals.

D. Qualifications to Serve as Major Advisor

1. The Major Advisor must meet the following criteria:

   a. Have an M.S., Ph.D. or professional doctoral degree

   b. Have a full-time appointment at the School of Pharmacy

   c. Be actively involved in research for at least one year

   d. Have the expertise to guide the students in their thesis subject

   e. Have published at least five (5) articles in peer-reviewed publications

   f. Have presented research result in professional meetings

   g. Demonstrate efforts to obtain external and internal funds

   h. Actively participate in the courses within the Graduate Program

2. In certain cases, a student can carry out his or her research under the supervision of an advisor outside the School of Pharmacy. However, in this case two *co-advisors are needed, one of whom will be a full-time faculty of the School of Pharmacy who meets the requirements specified above.

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*Co-advisor=person sharing equal responsibilities in a student’s research project with the student’s Major Advisor.
II. Responsibilities

A. Every Advisory Committee member must have a personal knowledge of the student’s thesis research.

B. Each Advisory Committee member must be able to attend the oral defense of the thesis.

C. Each Advisory Committee member must also be able to attend Advisory Committee meetings during the course of the student’s research.

D. The members assume the responsibility of complying with the time limits set by the faculty for completion of the Master of Science in Pharmacy degree from the University of Puerto Rico, Medical Sciences Campus.
APPENDIX D

APPLICATION FOR ADVISORY COMMITTEE
APPENDIX D

University of Puerto Rico
Medical Sciences Campus
School of Pharmacy
Graduate Program

APPLICATION FOR ADVISORY COMMITTEE

Title of Project: _______________________________________
__________________________________________________________________

My Advisory Committee will be formed by the following:

Major Advisor:

<table>
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<th>Academic Degree</th>
<th>Position/Affiliation</th>
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Members:

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<tr>
<th>Name</th>
<th>Academic Degree</th>
<th>Position/Affiliation</th>
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__________________________________________
Major Advisor Signature

__________________________________________
Student Signature

Student Name:_____________________________________
Student ID Number:______________________________
E-Mail:_________________________________________
Date:__________________________________________
APPENDIX D₁

CONSENT TO SERVE AS ADVISORY COMMITTEE MEMBER
CONSENT TO SERVE AS ADVISORY COMMITTEE MEMBER

I am willing to serve as member of the Advisory Committee of the student ________________ student number ___________________________ in the project titled: _____________________________________________________________________.

I will assume the following responsibilities:

- Have knowledge and provide support to the student throughout his or her thesis research project
- Attend Advisory Committee meetings
- Read and comment in a constructive manner on the dissertation
- Attend the oral defense and ascertain that the student is qualified to receive the degree of M.S. in Pharmacy from the University of Puerto Rico

__________________________________  ____________________________
Name  Academic Degree

__________________________________
Position

__________________________________  ____________________________
Address  Phone number

__________________________________
E-mail  Date

__________________________________
Signature
APPENDIX E

FORMAT FOR PROGRESS REPORT
APPENDIX E

University of Puerto Rico
Medical Sciences Campus
School of Pharmacy
Graduate Program

PROGRESS REPORT

Student Name: ____________________________________________
ID Number: ________________________________________________
Project or Proposal’s Title: ___________________________________
_________________________________________________________________
Academic Session: ____________________________________________
Activities Performed:

Plan (Include timetable):

Signature:_________________________   Date:___________________

Approved by Advisory Committee:
_________________________   Date:___________________
_________________________   Date:___________________
_________________________   Date:___________________