

Loyola Marymount University

Frank R. Seaver

College of Science and Engineering

Master's Thesis Requirements

These Guidelines are intended to supplement the individual requirements established by the various programs in the College. In some programs, the Master Thesis is a requirement; in some it is optional. The requirements are a good starting point in the event that a program wants to develop its own requirements. There is no intent to make these requirements mandatory in any program. However, each program that offers a thesis, should develop requirements, or use these, in order to provide consistency and to make the students aware of the “ground rules” from the start to avoid disappointment and wasted effort.

Initial Activities

Thesis Subject Matter and Thesis Committee

When a student prepares a thesis in the College of Science and Engineering at LMU, the thesis and associated work is intended to advance the state of knowledge in the thesis subject not “rehash” previous work by others or a serve as a “literature search.” To the extent possible, there should be some experimental work involved. The thesis ideally will form the basis for a paper or article, produced by the student, which would be submitted and hopefully published in a peer-reviewed journal or presented at a professional organization’s conference.

The thesis subject matter may be developed individually by the student or by the student in conjunction with a faculty member conducting research in the student’s area of interest, or a faculty member with an interest in finding a solution to a problem in the student’s area of interest. In the first case, the student would take the initiative and develop the research program; in the other cases, the student would assist the faculty member in the research or take some direction from the faculty member.

The student would develop a hypothesis – what is to be proven or disproven or identify a problem appropriate for the discipline and propose a solution. The purpose is to refine and focus the thesis activity. This will be discussed with the Program Director and, as appropriate, the faculty member whose research or interest closest matches the thesis subject matter. This faculty member will become the student’s thesis advisor. With direction from the Program Director, a thesis committee will be formed. The thesis committee will consist of the student’s thesis advisor, a full-time faculty member from the student’s department, and a third member from other than the student’s department. The purpose is to refine and focus the research activity. The faculty member will become the student’s thesis advisor.

A progress meeting should be held with the student and the thesis committee at least once per semester.

Thesis Proposal

Based on the student's discussion with the Program Director and faculty member, the student shall prepare a thesis abstract, of about 2 pages or so in length, that includes the following:

- Thesis title
- Clearly articulated hypothesis or problem to be solved appropriate for the discipline
- A concise experimental or research plan or plan to develop the solution
- Timeline for completion, including principal tasks and milestone dates

The student shall review the proposal with the Program Director and the thesis advisor and committee. Once the student has the approval of all, the student can register for the thesis course.

Registering for the Thesis and Timeline for Completion

Students must register for the thesis by enrolling in the respective program thesis class. The number of units for the thesis will be in accordance with the program's requirements. Most programs are flexible, but do have a maximum number of units (semester hours) per semester and total semester hours for the thesis. Unless specifically required, the thesis must be completed in two semesters. The number of units shall be split between the two semesters. If an extension beyond two semesters is needed, the student shall meet with the faculty advisor at least 6 weeks prior to the end of the second semester to request an extension. Additional time may be granted but there is no guarantee; additional units will not be granted. In no event will the extension exceed 1 full semester.

Grading

The student will be given a grade of "IP" (In Progress) as a matter of routine, for the first thesis semester and any subsequent semester thereafter. A formal grade will be assigned upon completion of the thesis as determined by the thesis committee.

Format and Content of the Thesis

The format and content of the thesis may vary from discipline to discipline and may be dictated by the program or department; but, in the absence of specific requirements, the thesis shall contain the following as a good starting point.

- Title page consisting of the thesis title, student's full name, student id number, date, thesis advisor, and the name and address of LMU, program/department

- Signature/Approval Page containing the thesis title, student’s name and signature line, thesis advisor’s name and signature line for approval, and names and signatures of the additional thesis committee members (signatures are obtained after approval, as discussed below)
- Abstract
- Table of Contents including a list of Tables and Figures
- Acknowledgements, listing as a minimum the thesis advisor and thesis committee and any others that provided significant input or help on the thesis
- A list of appropriate nomenclature, including symbols, acronyms and abbreviations
- Introduction including a clear statement of the original hypothesis or problem to be solved as appropriate for the discipline
- Background, including a summary of the literature search
- Experimental or research or study/investigation plan
- Summary of the experimental data or investigation
- Data analysis, including necessary statistical analyses
- Discussion and summary of the results
- Conclusions
- References (works cited)
- Bibliography (works reviewed but not cited plus works cited)
- Appendix material as appropriate

The same style font shall be used throughout. Font size shall be 11 or 12 point. Font size in tables can be smaller, i.e., 8 or 10 point. Line spacing shall be 1.5 spaces or double-spaced with approximately 1-inch margins all around. First order headings shall be no more than two “points” larger; second and subsequent order fonts should be smaller than first order headings. Any combination of underline, italics or bold fonts may be used for headings as long as the style is consistent throughout the thesis.

Single space shall be used for the Table of Contents, footnotes, endnotes, tables and figure, references and bibliography. Pages shall be numbered, with the Table of Contents, Abstract and Acknowledgements numbered with i, ii, iii, etc. The main body of the text shall have numbers centered on the bottom, beginning with “1”.

Captions for tables shall be on the top of the table. Tables shall be numbered consecutively and referenced in the text. Captions for figures shall be below the figure and shall be consecutively numbered and referenced in the text. All content of the figures need to be easily readable. Table and Figures shall be embedded in the text and as close to the table or figure reference as practical.

References in the text and footnote and bibliographic style shall be as directed by the thesis advisor. In the absence of specific direction, the student shall use the “author’s guide for the professional organization or journal that would most appropriately publish an article developed from the thesis.

Oral Defense Presentation

Approximately 8 weeks prior to the end of the semester, the student's thesis advisor will work with the other members of the thesis committee to select an appropriate time and date for the oral defense presentation. The thesis advisor will indicate the date and time of the oral defense presentation to the Program Director who will then advertise it to all faculty members of the College.

No later than two weeks before the thesis defense presentation, the student shall provide the thesis advisor with 4 copies of the thesis, complete in all respects, but labeled "DRAFT". The thesis advisor will distribute copies to the Program Director and the other committee members who will review them before the oral defense presentation.

The student will present the thesis in a logical and organized fashion, the format of which is left up to the student. The presentation would typically be between 20 to 30 minutes. Upon completion of the presentation, the student shall be ready to take questions from the Thesis Committee and audience. The student shall provide clear and concise answers. It is the intent of the Thesis Committee to determine how well the student has mastered the subject matter of the thesis, understands the work done by others, and can critically assess that work, as well as his/her own work. The question and answer period could last as much as 30 to 40 minutes.

On the same day, but after the oral defense presentation, the thesis committee will meet with the student to discuss the thesis and the oral defense presentation. Depending on the outcome, the thesis will have been deemed complete, complete with exceptions, or incomplete.

If the thesis is deemed "**complete**", the student shall incorporate any minor comments the committee makes to the thesis (i.e., typos, etc.), finalize it, remove the "DRAFT" wording and resubmit to the thesis advisor. The thesis advisor will submit the final grade for the thesis course.

If the thesis is deemed "**complete with exceptions**," the student shall perform whatever additional minor work is required, incorporate that work into the thesis, finalize it, remove the "DRAFT" and resubmit 4 copies to the thesis advisor, who, in turn, will provide copies to the thesis committee. The thesis committee will either accept the work or return it back to the student for further revision.

If the thesis is deemed "**incomplete**," the student will be granted another semester to complete the work and present it to the thesis committee as described above. The thesis committee will then will meet with the student to discuss the thesis and the oral defense presentation. Depending on the outcome the thesis will be deemed complete , complete with exceptions, or incomplete. If incomplete, the student will be given a grade of "IP."