Applied Statistics · Suggested Masters Thesis Timeline
(Revised 08/04/2022)

Introduction: **After a student has taken the core courses (STAT 510, 520, and 530), he/she is eligible to advance to candidacy. At this point the student should contact the graduate advisor in order to complete all the required paperwork. The paperwork involves filling out a form where you have to specify whether you plan to take the comprehensive exams or write a thesis (or a project, subject to meeting eligibility criteria). Below are guidelines for a student whose firm preference is writing a thesis.**

Preparation Stage: Choosing a Topic, Advisor and Committee

While completing STAT 510, 520, and 530, a student should approach a professor (possibly talk to several professors) regarding writing a thesis under her/his supervision. The talk between the student and professor should focus around choosing a suitable topic for the thesis that ties with the student's background and professional interests.

Once the thesis advisor and topic are decided upon, the student has to contact two more professors and secure their willingness to be members of the thesis defense committee.

Once the committee is formed, the student has to start researching the topic, by conducting extensive literature review, identifying several statistical techniques, and obtaining illustrative data sets.

Finally, the student has to write a detailed proposed outline of the thesis, a working title and abstract. The abstract should clearly list the methods the student intends to use or investigate in their thesis.
The working title and abstract are submitted by the graduate advisor to the Statistics Committee for approval, along with the advancement to candidacy form.

After the Statistics Committee members approve the thesis, the student is eligible to register for STAT 698 Thesis or Project (between 1 and 6 units). Typically, students take 3 or 6 units, with the graduate advisor's approval.

Timeline: **The deadline for submission to the graduate advisor is the end of the first week of the semester in which you plan to enroll in STAT 698.** Depending on an advisor and topic, the preparation stage might take up to three months.

Investigation Stage: Literature Review; Investigating Methods and Models; and Exploratory Data Analysis

The student is expected to do extensive reading of relevant published work related to the topic/methods of their thesis, and to apply statistical methods that are used in the field under study to illustrative data sets. This stage involves preliminary, exploratory analysis of data.

Communication: The student typically meets with her/his advisor at regular time intervals to discuss findings.

<mark>Timeline:</mark> This stage takes between one and two months.

Implementation Stage: Applying Methods to Data; Model Checking and Validation

In the thesis, the student has to finalize techniques used, programming codes, data models and results, and be ready to start putting it all in writing.

<mark>Timeline:</mark> It takes about one month.

Aggregation Stage: Writing up Results; Synthesizing Findings

At this stage, the student starts writing the thesis, preferably putting it in the correct format from the very beginning. Previous theses are available in the Library. It is advisable to start writing with introduction (Chapter 1), where the student would need to describe the background of the topic, possibly history, and literature review. Chapters 2 through 4 are typically devoted to the three statistical techniques, with theory and applications, and Chapter 5 contains the conclusion.

<mark>Timeline:</mark> To arrive at a decent final draft takes about two months.

Communication: Starting with the first draft (that has one-two paragraphs in each chapter), the student should send updates to her/his advisor on the regular basis. Starting with the third draft, the student might include the other two committee members in communication, requesting their feedback. A completed thesis should consist of front matter, a minimum 30 pages of content, and an appendix that summarizes any code created, relevant tables and figures, extended mathematical derivations, etc.

Presentation Stage: Scheduling and Preparing for the Oral Defense

Once the draft is in its final stage and all committee members have had a chance to contribute, the student should schedule an oral defense. Typically, the advisor helps the student to find

date, time, and place to meet, and prepares an announcement of the defense. The announcement must be sent out to the entire department by an office assistant at least one week prior to the defense. Defense is a public event, and everyone is invited.

==Timeline:== The readers have to be given at least two weeks to read over the draft of the thesis, and another week to schedule the oral defense.

Meanwhile, the student should be preparing Power Point slides for the defense. The defense is typically one hour long, of which about 40-45 minutes the student presents, and the rest of the time is devoted to questions and discussion. At the end of the defense, the committee members take a few minutes to discuss the case privately, and then congratulate the student and put their signatures on the **signature page**. The Chairperson of the department (as the College designee) has to put her/his signature on that page as well.

The student may generate the thesis signature page completing the form on the following webpage: https://na3.docusign.net/Member/PowerFormSigning.aspx?PowerFormId=453a4d03-dd30-48c2-9bab-9a3701b91db9

==Timeline:== The defense must be complete and signature page submitted by the dates established by the university. As indicated on the following webpage, students may graduate in Winter, Spring, Summer or Fall terms: https://www.csulb.edu/thesis-and-dissertation-office/submission-deadlines.

It is the responsibility of the student to make sure they
1. Are enrolled in a class or GS700G
2. Submit the signature page before the posted deadline
3. Apply to graduate on MyCSULB
for the term they desire to graduate.

Finally, the Thesis Advisor should submit the *Report on Thesis Defense* form to the department.

Culmination Stage: Addressing Committee Feedback; Completing Formatting According to Library Guidelines

After the defense, the student needs to spend some time incorporating into the thesis all the feedback obtained during the defense. The edits *should* not be major because the committee members would need to have given a substantial feedback prior to the defense.

Once the student is done editing the final draft, he/she should submit it electronically to the Thesis Office in the Library, and work with them on refining the formatting of the thesis according to the format guidelines. Thesis Office staff would provide all edits, which the student has to address.

Timeline: It typically takes a total of 10 hours to complete additional edits needed to get clearance from the Thesis Office, and about two months until the thesis is officially cleared .

<u>Sample ideal timeline</u>: To graduate in May, a student has to approach a potential advisor staring in April of the year before, spend, June-July researching the topic, come up with a working title, abstract, outline and full committee by the mid-August, do the paperwork for advancement to candidacy at the end of August (or earlier if possible) and register for STAT 698 for 3 units in the Fall semester, have the first draft ready by November, have the second draft ready by January, register for STAT 698 for 3 units in the Spring semester, have the third draft ready by beginning on February, defend at the beginning of March, submit thesis to the Thesis Office by mid-March (by the deadline), and make all corrections to the thesis and have it accepted by the Office by mid-April. If a student needs to defend and graduate in Winter or Summer semester, or if all coursework has been completed and only completing the thesis remains, they should enroll in GS700.