

Master's Thesis Handbook

Department of Speech, Language, and Hearing Sciences
California State University, East Bay

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What is a thesis?

The master's thesis option offers graduate students the opportunity to engage in research with a faculty member. A master's thesis entails both a public talk and written thesis document, which present the theoretical foundation, methodology, results, and implications of a research endeavor. A thesis project may be a clinical or non-clinical empirical study, methodological study, meta-analysis, systematic review (a standard literature review would not satisfy the thesis project), or a novel analysis of existing data.

What are the benefits of completing a thesis?

The thesis option has numerous benefits to students. ASHA requires that all accredited Speech Pathology programs provide students with broad training across all areas of voice, speech,

language, cognition, and swallowing, and across child and adult populations. Students entering the field often have a particular area or population they hope to serve. Such students may wish to obtain specialized learning and expertise with a particular population or disorder that goes beyond the standard coursework and clinical experience. Other students may wish to get a sense of what research entails before committing to a doctoral program in Speech-Language Pathology. Still others may have no wish to pursue doctoral studies and see the master's thesis as the last opportunity to engage with in-depth research before beginning their clinical career. For these and other reasons, the thesis option offers an attractive alternative to comprehensive exams.

Students completing an approved Master's thesis will not be required to take the comprehensive exams as part of their academic program.

What are the requirements for a thesis?

The following are the requirements for a departmental thesis. A university thesis has a different set of requirements and a different timeline. More information on university theses can be found here: <http://catalog.csueastbay.edu/content.php?catoid=21&navoid=15654#capstone>.

A student interested in a master's thesis must meet with a faculty member and collaboratively determine a viable thesis project. The student must then meet with two other faculty members and solicit their agreement to serve on the thesis committee. The first milestone is the submission and acceptance of the Master's Thesis Proposal Form, which describes the proposed project and committee members. Empirical studies involving human subjects will require Institutional Board Review (IRB) application.

A student must register for SLHS 699 (2 units) in the first, second, or third semester of thesis work, with the selected semester determined by the Thesis Chair and Department Chair to meet student unit and faculty workload requirements. The SLHS 699 registration process is not completed by the student, but through a Special Registration Petition process completed through the department. The form can be found on the Registrar's site:

<http://www.csueastbay.edu/registrar/files/docs/forms/special-registration-petition-2.2018.pdf>.

Students should submit the completed form to their Thesis Chair for approval.

In the student's final semester, he/she must deliver a one-hour presentation (40 minute talk, followed by 20 minutes for questions) to the department faculty, students, and staff. The formal written thesis document must be submitted to and approved by the thesis committee in the final semester. Sample timeline information can be found below.

The student must maintain a GPA of at least 3.50 before beginning a thesis and during the entire duration of the thesis work. Additionally, if at any time the student's clinical or academic

performance places them on a remediation plan, they will be required to suspend thesis activity until successful completion of the remediation plan.

How do I form my thesis committee?

A thesis committee is made up of three members. Typically one member is the “chair” of the thesis, which in most cases is your primary thesis advisor, and the person that you work most closely with throughout the thesis. The other two members will be asked to provide expertise or feedback at certain points in the thesis project. Some members will be more involved in study design than others. Some may be most involved when analyzing and interpreting data. The involvement of each committee member should be discussed with your primary thesis advisor and should be agreed upon by each of the committee members.

All members of the thesis committee must have an earned doctorate (Ph.D.). Two of the three members, including the thesis chair, must be faculty in the department of Speech, Language, and Hearing Sciences at Cal State, East Bay (either tenure-track or tenured). Students are encouraged to invite someone from outside the department to serve as the third committee member, but this is not a requirement. The third committee member should have expertise that is relevant to the project and often complementary to the other two committee members. The reason for choosing an outside member is that faculty from other (overlapping) fields often provide unique insights and perspectives into the problem the student is working on, which can benefit the thesis and the student’s understanding of their research.

The first step to forming a thesis committee is to obtain a thesis advisor. You should approach a faculty member with whom you would like to work and/or who has expertise in the topic you would like to pursue for the thesis. The thesis topic must be within the advisor’s area of expertise. When you meet with a potential thesis advisor, you should describe your research interests, your motivation for completing a thesis, and ask that person if they will be your thesis advisor. The decision to advise a student’s thesis depends on the relevance of the student’s research interests with the faculty member’s expertise, the faculty member’s current workload, as well as other possible factors. You must have a faculty member’s explicit agreement to serve as the primary thesis advisor (“chair”). A conversation with a faculty member about a potential thesis, without explicitly asking that person to serve as thesis advisor, does not constitute an agreement by the faculty person to be the chair of your committee.

Once you have a thesis chair, you can discuss with your thesis chair who you might want to invite to join the thesis committee. This will depend on the type of project you plan to carry out, so this decision may be made only when the project is sufficiently developed. Each of the thesis committee members should be formally invited by the student and explicit agreement obtained by the committee member to serve on the thesis committee.

Committee formation must be done before the Master's Thesis Proposal Form is submitted as this form requires the signature of each of the members of the thesis committee.

What are the components of a thesis?

A completed thesis consists of four major components: a literature review, a description of the study's methodology, a detailed description of the results, and a discussion of how the study contributes to the advancement of the scientific understanding of issues that are relevant to our field. In addition to these four major components, a thesis typically includes a short abstract that gives an overview of the study and its findings. The thesis should also include a list of references for all citations included in the thesis. Many theses will have some supplementary information included in an appendix. Most students also choose to write an Acknowledgments section. Be sure to include a list or description of any funding you received for the study or to support your involvement in research. This can go in the Acknowledgments section. Each of these components are described in more detail below.

The guidelines for academic writing set forth by the American Psychological Association should be used for all theses. Always use the newest edition of the APA Style Handbook.

Abstract

An abstract is a brief description of the research, and it includes the primary aims of the study, a brief overview of the methodology, the primary findings, and the main conclusions. The abstract is typically only 250-500 words long. Try writing this section as if you needed to tell someone about your study but you had less than 5 minutes. What are the essential pieces of information they would need to know to understand how you conducted your study and what the importance of your findings is?

Literature review

Scientific advancement is incremental. This means that big findings are usually the result of a lot of small studies that lead to a set of hypotheses, testing of those hypotheses through a series of studies that explore various aspects of the hypotheses, and eventual consensus. This is the process of theory building and refinement. You will need to situate your study within the scope of the current research on your topic. This requires reading a set of papers on your topic and being able to summarize across them. This provides the scientific context for your study.

The literature review process involves selecting a set of papers on your topic with the help of your thesis advisor and/or committee members. The readings should help you identify what the current understanding is on your topic, what the theories are, what methodologies are used to test the theories, what current debates may exist on this topic, and how your study fits into all of this.

The primary purpose of the literature review section of the thesis is to motivate your research questions and hypotheses. You may read some papers during the review of the literature that will not end up being included in the literature review section of your thesis. The written literature review section should only contain those references that support the development of the ideas that lead to the aims of your study.

Methodology

The methodology section of the thesis should include a sufficient description of the methods of study design, data collection, and analysis to provide someone reading your thesis who is unfamiliar with your study enough information to run the same exact study on their own. You should provide a detailed description in the text, and you may want to include additional details, such as a stimulus list, in the appendix. Information included in the appendix should be referenced in the text.

The methods section of the thesis will differ depending on the type of study you conduct. Empirical studies typically include a section on study design, stimuli, participants, procedure, and data analysis. Meta-analyses and systematic reviews typically include a description of the selection criteria and details about the studies included in the review.

Study design and stimuli: This information included in the study design and stimuli section will vary depending on the type of study that was conducted. For example, for within-group or between-group comparison studies, you would include information such as the number of stimuli, number of trials, and a description of the selection criteria for stimuli or the process of stimulus creation. If there are multiple conditions, include a description of each condition and how many stimuli were included in each. If a pilot study was conducted during stimulus creation, describe how this pilot was conducted and how the results contributed to stimulus creation. A full stimulus list is often included in a Master's thesis and is most likely to be included in the Appendix unless the list is quite short. The description of the study design and stimuli may be included in a single section or in separate sections depending on the amount of information included on each topic. Different descriptives would be included for single subject case studies, intervention designs, and meta-analyses, for example. Refer to prior research on your topic to see what goes into a robust study.

Participants: Describe the participant characteristics in detail. Most studies minimally include information about participants' age and sex/gender, but other demographic information might include their highest level of education obtained, their native and second languages or other information about their language learning and language use background, or other variables that have the potential to affect the results or to provide clues about patterns of findings. Studies with clinical populations will need to include a sufficient description about participants' diagnoses, and other characteristics such as severity, length of time with diagnosis, treatment histories (if known), etc. In all cases, you should include any inclusionary and exclusionary criteria that you

applied during recruitment. It is also common to describe how and where participants were recruited in order to account for potential selection bias.

Procedure: For empirical studies, this section describes how the study was conducted. Include information about which tasks were given and in what order, what the conditions of the testing environment were like, how the experiment was displayed (e.g., on a computer monitor, on paper), whether the tasks were timed or not, and other details that would allow a different researcher to run the exact study based on the information you provide. Also describe whether the study was approved by the Institutional Review Board and whether participants provided informed consent before participating.

For meta-analyses and systematic review papers, this section will describe the procedure of study selection based on a set of criteria and whether any studies that were removed for each criterion.

Data analysis: Give an overview of the analyses you ran, including clear identification of the dependent and independent variables. If there were multiple steps to the analysis, describe each step. This is not where the results will be described. Instead, you want to describe the analysis you chose and what variables were included in the analysis. If data cleaning techniques were employed (such as an outlier analysis), describe those as well. If any data was removed before the analysis, describe why the data was removed.

Results

The results section of your analysis should describe each analysis performed in clear, factual text. The results should be clearly described but no interpretations of the result should be included in this section (they will go in the Discussion section).

You should follow the guidelines of the APA Style Handbook for reporting statistical results. If you report a statistical effect, describe the direction of the effect. For example, if an ANOVA was reported showing a significant difference between two groups, state this, and also include a description of which group showed a higher (or lower) score.

Include data tables and graphs or charts where appropriate. These can be very helpful in understanding the results. Make sure that tables and graphs are clearly labeled, with titles for the x- and y-axes, and follow the guidelines of the APA Style Handbook.

Discussion

The discussion section should pull together the various pieces of the thesis and result in novel insights and contributions. Remind the reader briefly what the primary goals of the research were and how you addressed those goals. The discussion section can be structured in different ways. You may want to structure the discussion by the research questions that were posed, by

the competing theories that the results may be able to distinguish between, or by the primary and secondary set of findings, for example.

The goal of the discussion section is to describe how the findings from your study contribute to the broader scientific understanding of the topic you studied. This section should answer the research questions you posed. You may want to relate your findings to results from other studies, particularly if the findings are contrary to the findings of other studies. If the hypotheses were not confirmed, describe some of the reasons why they might not have been confirmed. In this section, you should describe some of the study's limitations, and you can also propose directions for future research. You should also consider what implications the findings have in the broader context, such as educational, clinical, and social settings.

Conclusion

The conclusion is short and should underscore the main points that you want to leave the reader with. This section often emphasizes the broad picture and the strengths of the study.

What is the timeline for completing a thesis?

The actual timeline for completing a thesis will differ depending on factors such as the size and scope of the project, the type of project, the ease or difficulty of recruiting study participants, the student's goals, and whether the student's project is tied to a larger faculty project, among other possible factors. Therefore, it is important to establish with your faculty advisor early on a tentative timeline for your project so that you are able to make consistent progress on the thesis.

A thesis project typically takes 1-2 years to complete. If the student's project is developed from scratch and involves testing a relatively difficult-to-find clinical population, it will likely be on the longer end of this range. If the student's project is part of an existing faculty member's project or is an extension of a previous project that the student or their faculty member has already completed, this can reduce the amount of time needed for the study development stage and therefore the overall time frame.

CC II Master's students who are interested in completing a thesis should begin working with their thesis advisor by the end of their first semester in order to have sufficient time to complete the thesis before graduation. CC I Master's students who are interested in completing a thesis should begin working with their thesis advisor by the end of their second year.

Below are some sample timelines. Your timeline may differ depending on a number of factors, such as those described above. You should set up a planned timeline for thesis completion together with your advisor.

4-semester timeline for a student-led project

Fall Year 1:

- Literature review
- Development of research question
- Write draft of Literature Review section

Spring Year 1:

- Study design
- IRB approval
- Pilot testing
- Write draft of Methodology section

Summer/Fall Year 2:

- Data collection
- Data preparation and coding
- Data analysis

Spring Year 2:

- Write draft of Results and Discussion sections
- Finalize draft of thesis and get feedback from committee members
- Thesis defense

4-semester timeline for a project that is part of a faculty-led project

Fall Year 1:

- Development of research question within the scope of the larger project
- IRB approval
- Data collection
- Data preparation and coding
- Write draft of Methodology section

Spring Year 1:

- Literature review
- Write draft of Literature Review section
- Data analysis

Summer/Fall Year 2:

- Data analysis
- Write draft of Results and Discussion sections

Spring Year 2:

- Finalize draft of thesis and get feedback from committee members
- Thesis defense

What forms do I need to submit and by when?

The Master's Thesis Proposal Form must be signed by the student and the thesis committee members as soon as the committee is formed and the topic of the thesis has been decided. The signed form should be submitted to the thesis advisor, who will bring it to the faculty meeting for approval. The department chair will need to sign this form, and the form will then be added to the student's file.

What are some funding opportunities for theses?

CSUEB Center for Student Research Scholar's Program

The Center for Student Research (CSR) sponsors a Scholar's program through which students can apply to work with faculty on mentored research projects and earn tuition support. Funds are also available to purchase research-related supplies and support student travel. Students must apply to the program by the annual deadline (typically the end of August) to be considered, but there are no prerequisites for eligibility. Once accepted, CSR scholars must meet minimum requirements that are outlined on the website, but briefly include: meeting semester timeline requirements (e.g. attending a program orientation, completing a progress report), presenting a poster at the Cal State East Bay Student Research Symposium held in April, and demonstrating professionalism.

Deadline: In the summer for the next academic year (check website for updates)

Website: <https://www.csueastbay.edu/csr/index.html>

American Speech-Language-Hearing Foundation Graduate Scholarship

ASHFoundation sponsors up to 15 general and 9 endowed scholarships of \$5000 each for students accepted to or currently enrolled in master's level programs. There are three categories for which students may apply within the endowed category, including International (students must be non-U.S. citizens), minority students scholarship, or NSSLHA scholarship. The application is quite time-intensive and as such it is recommended that students begin this application well ahead of the deadline. In addition to a letter of application and an essay, students will need a copy of their transcript, letter of acceptance or statement of good standing from the University, and 3 letters of recommendation (please discuss the letters with potential letter-writers *at least* 3-4 weeks in advance of the deadline). The funds, if awarded, are to be directed toward educational support (e.g. tuition, books), not student travel.

Deadline: Reopening in 2020 (check website for updates)

Website: <https://www.ashfoundation.org/apply/graduate-student-scholarship/>

ASHA Students Preparing for Academic-Research Careers (SPARC) Award

This award is intended to support undergraduate (juniors or seniors only) or master's degree students who have an interest in pursuing a research doctorate (Ph.D.) in the field of

Communication Sciences and Disorders. Awardees must also be members of NSSLHA at the time of the award. Awards provide \$1000 and structured opportunities to network at the annual ASHA convention.

Applications require a mentored teaching and research plan, brief narrative, recommendation letter from your proposed mentor(s), and a budget proposal outlining how you will spend the \$1000. The funds may be used toward supplies (with the exception of personal electronic devices), research participant payments, and/or conference registration and travel. An interim and final report will be submitted documenting progress towards goals.

Deadline: Reopening Feb 1, 2020 (check website for updates)

Website: <https://www.asha.org/Students/SPARC-Award/>

Project-specific funding

There may be funds available to support student research associated with a particular project. Speak to your mentors to see if any of these opportunities are available and/or appropriate for your situation. Keep in mind that students can not work over 20 hours per week, including work study (this does not include CSR Scholar positions, which offer tuition support and not direct payment). The application process, duties, and/or time commitment will vary by project/mentor.

Deadline: Varies

Website: N/A

Master's Thesis Proposal Form

Student Name:	
Net ID:	Cohort:
Planned Semester of Graduation:	

THESIS TITLE:

PROJECT DESCRIPTION: Please include a brief description (5-7 sentences) of the proposed project and research methods, including how the study is an original contribution to the field and its relevance to the field.

If your project involves Human Subjects Research, check the appropriate box below:

IRB approval already obtained OR IRB approval will be obtained before data collection

THESIS SUPERVISING COMMITTEE:
Note: All members must hold a Doctoral degree; two must be SLHS faculty with tenure or on a tenure-track.

Chair Name	Dept.	Signature
Member Name	Dept.	Signature
Member Name	Dept.	Signature

STUDENT STATEMENT
I, the student, have reviewed the Master's Thesis Handbook and understand the expectations for meeting the thesis requirements for the Master's degree in Speech, Language, and Hearing Sciences.

Signature: _____ Date: _____

DEPARTMENT CHAIR APPROVAL
I, the Department Chair, have reviewed the above proposal including the composition of the supervising committee and find it acceptable for meeting the thesis requirements for the Master's degree in Speech, Language, and Hearing Sciences.

Signature: _____ Date: _____