

**College of Computing and Software Engineering  
Master's Thesis Guide**

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## 1. Master's Thesis Objectives

The Master's thesis in the CCSE is a formal research paper. As such, it is meant to accomplish the following goals:

- Provide an opportunity for the student to work on a research project with a graduate project- domain expert faculty and a committee of subject-matter experts.
- Contribute to the body of knowledge in the field of computer science, software engineering, or information science and technology.
- Acquire an in-depth level of knowledge in the thesis domain area and receive credits towards the fulfillment of a Master's degree in a CCSE program.
- Answer to one or more research questions.

Although it takes a certain level of maturity and possibly more effort, there are numerous advantages to completing a Master's thesis. It will demonstrate your level of expertise and sophistication in your field, level of maturity and readiness to move into positions that require robust ability to solve complex problems, and readiness for further education, such as the doctoral program. It will also serve as a basis for publications of articles and further contributions to your field.

## 2. Master's Thesis General Process

The process of creating a Master's thesis follows a structured methodology. The stages of this process are as follows:

Stage	Description
<b>Topic Approval</b>	<p><b>Term before signing up for thesis:</b></p> <ol style="list-style-type: none"> <li>1. Research idea for thesis about topics that interest you.</li> <li>2. Speak with various faculty about their interest in a) serving as the thesis advisor, or b) serving as a committee member (you will share your research concept with the faculty).</li> <li>3. Make sure your planning phase includes an understanding of the quality requirements of the thesis. See Section 3 on Thesis Quality Objectives.</li> <li>4. For specifics of getting the MS Thesis Topic approved, follow Section 4 on Thesis Topic Approval Steps.</li> </ol>
<b>Registration</b>	Register for first term of thesis (3 credit hours). See Section 5 on Thesis Credits-Registration & Procedure.
<b>Beginning of First Term of Thesis</b>	<ol style="list-style-type: none"> <li>1. Meet with thesis advisor during the first 2-3 weeks of term to lay out plan for the term.</li> <li>2. By the end of 3rd week, a proposal (approximately 5-10 pages) is due. See details of Section 6 on Thesis Work Plan &amp; Delivery Guideline.</li> <li>3. Also See Section 3 on Thesis Quality Objectives to ensure that your thesis will be at the described quality.</li> </ol>
<b>First Term Deliverables</b>	<ol style="list-style-type: none"> <li>1. Completed initial chapter (agreed upon by thesis advisor and student) to your thesis advisor and committee members.</li> <li>2. See details of Section 6 on Thesis Work Plan &amp; Delivery Guideline.</li> </ol>
<b>Registration</b>	Register for 2nd term of thesis (3 credit hours). See Section 5 on Thesis Credits-Registration & Procedure.
<b>Beginning of Second Term of Thesis</b>	<ol style="list-style-type: none"> <li>1. Meet with thesis advisor during first one to two weeks of term to lay out plan for term.</li> <li>2. See details of Section 6 on Thesis Work Plan &amp; Delivery Guideline.</li> </ol>
<b>Progress</b>	As chapters are completed, you will submit them to thesis advisor and committee members for comments and editing
<b>Editing and Plan for Presentation</b>	<ol style="list-style-type: none"> <li>1. Present final "draft" version of completed thesis to thesis advisor and committee members for editing and modifications.</li> <li>2. Set up with thesis advisor and committee time for presentation and defense of thesis.</li> <li>3. See Section 6 on Thesis Work Plan and Delivery Guideline.</li> </ol>
<b>Final Document</b>	1. After incorporating all comments from advisor and committee members, prepare final thesis according to

	<p>guidelines (See Appendix A.4 for Sample Thesis Format).</p> <ol style="list-style-type: none"> <li>2. Bring finished thesis copies to thesis advisor and others for signature.</li> <li>3. After obtaining committee signatures, bring thesis to department chair and dean for signatures.</li> <li>4. Turn in finished copies to library for binding</li> </ol> <p>See Section 6 on Thesis Work Plan &amp; Delivery Guideline.</p>
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**Additional Process Information: (Extension of Thesis beyond 2 semesters)**

1. If you are unable to complete your thesis at the end of the two terms, you MUST get your thesis advisor's permission to continue into the next term with your thesis.
2. You then MUST register for additional hours for your thesis (3 credits hours) for the next term.
3. At the end of that one term extension, you need to have completed your thesis according to the process listed above.
4. See Section 5 on Thesis Credits-Registration and Procedure for more details.

### 3. Master's Thesis Quality Objectives

CCSE students' research and thesis must meet the following "quality" requirements, as judged by the student's thesis advisor and the committee members.

- The research leading to your thesis must be of sufficient quality and depth to effectively address the research question.
- Your thesis must make a professional contribution to the field of computer science, software engineering, information science and technology or related areas.
- An outcome of your research work must be a scientific paper, which needs to be submitted to a conference or a journal for external publication. The acceptance of the paper is not a requirement for graduation, but if the reviews from the conference or journal are known before the thesis submission they have to be addressed in the final version of the thesis
- The thesis must conform to the style guidelines prescribed by the current edition of the Publication Manual of the American Psychological Association (APA style manual).
- The final draft of the thesis must be thoroughly copyedited and proofread.

### 4. Thesis Topic Approval Steps

The following steps describe the steps that must be taken to have a Master's Thesis topic approved. Pre-requisites:

Graduate GPA must be 3.0 or above.

All your transition courses (if any) must be completed

At least 12 credit hours of graduate courses in the student's major program must be completed (or expect to be completed) by the end of the semester in which the student is seeking approval.

#### Step 1:

In completing this first step, activities (a) and (b) listed below may iterate and may not be sequential. For example, discussions about the thesis topic may occur between the student and some number of potential thesis advisors.

- a) Write a one-page thesis topic description including i) a paragraph that describes the general area of interest, ii) a paragraph on the student's specific area of research, iii) a paragraph on the expected outcome of the thesis, and iv) a list of three to five reference articles.
- b) Discuss with some graduate faculty member in the CCSE who is willing to direct the Master's thesis and serve as thesis advisor based on your one-page thesis topic write-up.
- c) Find a faculty member who agrees to be the thesis's advisor and finalize the one-page thesis description incorporating the comments received by the advisor.
- d) Obtain the thesis advisor's signature on the one-page thesis topic description paper.

The college will organize a seminar a semester to present thesis opportunities.

**Step2:**

Turn in the signed one page thesis topic description to your Graduate Program Coordinator, keeping a copy for yourself. The student's Graduate Program Coordinator, thesis advisor, and the student will jointly agree on the appointment of a thesis committee composed of the thesis advisor and two more graduate faculty members.

One of the two thesis committee members may be from another department outside the student's major department. However, in the event that the outside thesis committee member is from outside of the CCSE, then the External Thesis Committee Member Approval Form (see appendix) must be filled, the thesis advisor's signature must be secured, and the CCSE Dean's approval signature on the Form must be obtained. A copy of the approved External Thesis Committee Member Approval Form must be turned into the Dean's office, and the student should also keep a copy.

**Step3:**

Gain agreement from the thesis committee members on the thesis topic based on the one page thesis topic paper which is already signed by the your thesis advisor. If any major change to the thesis topic description is needed, from the discussions with any committee members, then go back to Step 1.

**Step4:**

Obtain signatures from all thesis committee members for the Thesis Topic Approval Form (see appendix), to which the one page thesis topic description is attached. Your department chairperson's "approval" signature along with the CSE Dean's "approval" signature must be obtained after all the other signatures are completed. A copy of the signed Thesis Topic Approval Form is then turned into the department chair, to the CSE Dean's Office, and also given to the student's thesis advisor. You should also keep a copy. At the completion of Step 4, your Master's thesis topic is "approved."

## 5. Thesis Credits - Registration and Procedure

Your master's thesis topic has been approved before you can register.

### Policy and Requirements:

- A student can register for 3 credits for thesis each term.
- A student will only be allowed to register for thesis in a given term if the thesis topic has been approved before the first day of classes of that term.
- A student will need to be registered continuously for thesis from the term after their topic is approved until the term in which the thesis is defended. The summer semester may be skipped, but skipping a regular semester will require the approval of both the thesis advisor and the department chairperson.
- A student may only use up to 6 hours of credit for thesis courses and have that applied towards the completion of a Master's degree. They may register for 3 more credit hours and an additional semester to complete their thesis, but the additional 3 credits will not count towards the completion of the Master's degree.
- A student who is making satisfactory progress towards their thesis (as deemed by their advisor) but has not yet defended it will receive a grade of "IP" for that term. Upon successful defending of the thesis the graduate coordinator will change those grades to "S."
- If a student who has been registered for a thesis does not wish to continue, he/she will notify his/her advisor and the graduate coordinator, normally before the official drop date for that semester; and it is allowed after official drop date only for very special unforeseen circumstance with the permission of the thesis advisor and the graduate coordinator. The student will get a grade of "W" for that semester.
- If for some reason the student cannot or does not wish to continue with the thesis after earning an "IP" grade for a semester, the student will inform his/her thesis advisor and the graduate coordinator. The previous "IP" grade, different from an "I" grade, will not be changed and remain on the transcript as 'IP.'
- If an advisor considers that a student is not doing satisfactory progress he or she may request that the thesis be cancelled; in this case the student's grade will be changed to a grade of "U" (subject to the normal grade appeal process).

### Registration Process:

1. In the term before the student wishes to be registered for the first time, he/she should get the topic approved as described in Section 4 on Thesis Topic Approval Steps.
2. Before the second day of classes on each term the student wishes to be registered for thesis, the student will send an email to the graduate coordinator and department chair, with copy to his/her advisor, asking for the registration.
3. Within the last two weeks of the semester, if the student will not defend the thesis by the end of that semester, the advisor will send an email to the graduate coordinator (copying the student and other committee members) stating the grade the student should receive for that semester (IP if the student is doing satisfactory progress, or U if not) See Master's Thesis Result Report form in the Form's Section.
4. After the student has successfully defended the thesis and satisfied all other requirements the grade will be changed by the graduate coordinator to S. If the

student defends a thesis in one term, but cannot fulfill all the other requirements, the student will get a grade of IP and the grade will be changed to an S if the student fulfills all other requirements before the last day of classes of the following term.



## 6. Thesis Work Plan & Delivery Guideline

The thesis takes at least two semesters to be completed. The course may be repeated, but only 6 credit hours may be applied toward the degree. Also, see Section 3 on Thesis Quality Objectives to ensure that your thesis is of proper quality level. See Appendix topics on A.1 Literature Survey, A.2 Reference Material Format, A.3 Academic Integrity Resources, and A.4 Thesis Format for further guidelines.

### Pre-requisite:

The Master's Thesis Topic Approval Form is completed, and the approved form is turned into the student's department.

### First Semester

1. Three weeks into the first semester  
Submit approximately 5-10 pages proposal to your thesis advisor. The proposal should include:
  - thesis topic and its significance
  - research question that specifically states what you will attempt to answer
  - bibliography and explanation on how each source is useful to answer your research question
  - plan for data gathering and analysis
2. Four weeks into the first semester
  - If your proposal was not approved, revise it according to your thesis advisor's suggestions and resubmit the proposal.
  - If your proposal was approved, go to the next step.
3. Five weeks into the first semester
  - Submit your approved thesis proposal to at least one of your other thesis committee members, and the choice of which other committee member may be appointed by your department chair.
  - If your research requires human subject participation, you have to receive approval from Kennesaw State University Institutional Review Board. See <https://www.kennesaw.edu/irb/> for more information.
4. Ten weeks into first semester
  - Submit 10-15 pages working outline to the thesis advisor. The working outline is an important document that will guide you through the thesis writing process. You have to use clear and informative headings. Each topic should address one aspect of your research.
  - Use the approved working outline to write the initial chapter.
5. End of first semester
  - Submit the initial chapter to your thesis advisor and to the other thesis committee members.

## **Second Semester**

1. First week into second semester
  - Revise the initial chapter, if necessary
  - Submit a schedule for submitting each chapter of the thesis
2. Weeks two through ten
  - Revise submitted chapters and conduct additional research suggested by advisor and other thesis committee members
3. Eleven weeks into second semester
  - Submit your thesis draft to your thesis advisor and other thesis committee members.
4. Twelve weeks into second semester
  - Complete all revisions suggested by your thesis advisor and other committee members.
  - When your advisor and the entire thesis committee approve the draft, then you and your advisor will set up a defense date.
  - Send the thesis defense information to the Dean's office so that it can be announced to College of Computing and Software Engineering.
5. Fourteen week into second semester
  - Defend your thesis
  - Submit your thesis through the Digital Commons  
<http://digitalcommons.kennesaw.edu/etds.html>
6. Final week of class
  - Sign Master's Thesis Library Acceptance Form (Appendix X)

Notice that if you need more than two semesters to complete your thesis, you can continue your thesis for another semester (you need to enroll in the thesis course). The description above will apply to the student's last semester.

## 7. Appendix: Further Guidance

### A.1 Literature Survey:

As part of your proposal and your thesis, you need to demonstrate familiarity with the relevant research related to your thesis topic. The purpose of the literature survey is to convey your knowledge of existing related research; you must be able to address what has already been done in the area to be able to justify why your research is contributing something new to the literature. This information will comprise the literature survey, which should reference the major standard articles and textbooks in the general area of your research. Additionally, for the specific area of thesis research, the literature survey should include at least 15 related articles ranging from the recent five years to no more than 30 years ago. The articles should come from the top level refereed journals and conferences in your area (e.g., *IEEE Software*, and national or international conferences.) You should avoid unpublished white papers and position papers linked to a particular hardware or software product.

The literature survey should be predominantly located in the Second Chapter of the thesis, and should constitute about 20-25 percent of the thesis content. In addition, the First Chapter of the thesis will reference some of this research to support your thesis statement, and throughout the thesis as you bring in outside references to support your ideas, you will use citations to research identified in your literature survey. Finally, the thesis should conform to the style guidelines prescribed by the current edition of the *Publication Manual of the American Psychological Association* (APA style manual).

Check out library's guide on literature search:

<http://libguides.kennesaw.edu/content.php?pid=323540&sid=5734097>

### A.2 Reference Material Format:

MS theses in the School of CCSE use American Psychological Association (APA) style for citations and references. <http://www.apastyle.org/> is the main website that documents APA style guidelines.

Students unfamiliar with APA style should start with the tutorial [http://www.apastyle.org/](http://www.apastyle.org/Home) Home » Learning APA Style » Free Tutorials » The Basics of APA Style). Additional resources: <https://owl.english.purdue.edu/owl/resource/560/01/>

### A.3 Academic Integrity Resources:

MS theses in the School of CCSE are held to the highest standards of academic integrity. Students should be aware that their thesis will be examined closely by two to three readers, and plagiarism, falsification of data, or other instances of academic misconduct will be **punished severely**. Here are some resources to help students make sure they are doing things right: <https://web.kennesaw.edu/scai/content/ksu-student-code-conduct> and <http://libguides.kennesaw.edu/content.php?pid=679595&sid=5633921>

#### A.4 Sample MS Thesis Format:

##### **Spacing**

The thesis should be one-sided and double-spaced with six lines per inch and 10 spaces per inch (pica spacing). It should have a ragged right margin unless it is prepared with a machine that does true proportional spacing. Add an extra space between paragraphs. Paragraphs should be indented 3 to 5 spaces (be consistent). Use standard techniques for single spacing and indenting long quotations.

##### **Margins**

The thesis will be bound by the library, so uniform margins are required. The left margin must be 1.5 inches. The top, bottom, and right margins must be one inch.

##### **Pagination**

The initial title page of the thesis is not numbered. All other front material, up through the abstract, is to be numbered in lowercase Roman numerals placed in the upper right corner of the page within the margins. This means that numbers will be one inch from the top of the page and one inch from the right hand side, or six lines down and 10 spaces in from the right.

The initial page of the thesis text is not numbered. All subsequent pages are numbered using Arabic numerals placed as indicated above.

The following page illustrates appropriate headings and subheadings for use throughout the text. Add a paragraph for your department to supply approved styles and placement of quotes.

## **Chapter III**

### **Somewhere Over the Rainbow**

Major divisions such as chapters should have the designation and heading in all caps and centered, starting one inch from the top margin.

#### **Rainbow Spectra**

The next lower level of organization is a section. It should have three blank lines above the heading, which is centered, capitalized, and underlined. Section headings appear without page numbers in the table of contents.

Subsection headings should have two blank lines above and should be left-justified, capitalized, and underlined.

#### **Candy-Apple Red**

Sub-subsection headings should have two blank lines above and should be left-justified and capitalized.

*Minimum - department may exceed*

## **Front Matter**

On the following pages are examples of the front matter in the appropriate format. They are in the order they should be in the final document.

Sample title-centered, single-spaced, all caps  
(when centering, don't forget the wide left margin)

A Thesis Presented to  
The Faculty of the (your department) Department

by

(your name)

In Partial Fulfillment  
of Requirements for the Degree  
(your degree designation here)

Kennesaw State University  
(month and year of graduation)

In presenting this thesis as a partial fulfillment of the requirements for an advanced degree from Kennesaw State University, I agree that the university library shall make it available for inspection and circulation in accordance with its regulations governing materials of this type. I agree that permission to copy from, or to publish, this thesis may be granted by the professor under whose direction it was written, or, in his absence, by the dean of the appropriate school when such copying or publication is solely for scholarly purposes and does not involve potential financial gain. It is understood that any copying from or publication of, this thesis which involves potential financial gain will not be allowed without written permission.

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<Your Name>



**Notice To  
Borrowers**

Unpublished theses deposited in the Library of Kennesaw State University must be used only in accordance with the stipulations prescribed by the author in the preceding statement.

The author of this thesis is:

Your name,  
centered

A permanent address, centered

The director of this thesis is:

Thesis director's name,  
centered Thesis director's  
address, centered

Users of this thesis not regularly enrolled as students at Kennesaw State University are required to attest acceptance of the preceding stipulations by signing below. Libraries borrowing this thesis for the use of their patrons are required to see that each user records here the information requested.

Name of user	Address	Date	Type of use (examination only or copying)
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Sample title-centered, single-spaced, all caps  
(when centering, don't forget the wide left margin)

An Abstract of  
A Thesis Presented to  
The Faculty of the (your department) Department

by

(your name)  
(previous degrees, schools, and years)

In Partial Fulfillment  
of Requirements for the Degree  
(your degree designation here)

Kennesaw State University  
(month and year of graduation)

<The brief abstract of your thesis goes here>

Sample title-centered, single-spaced, all caps  
(when centering, don't forget the wide left margin)

A Thesis Presented to  
The Faculty of the (your department) Department

by

(your name)

In Partial Fulfillment  
of Requirements for the Degree  
(your degree designation here)

Advisor: (your advisor's name)

Kennesaw State University  
(month and year of graduation)

You may include any of three optional sections here. They should follow the general style guidelines for the entire document. If you include more than one optional section, put them in order indicated. The optional sections are:

- (1) A dedication page, of the form - To Whom It May Concern Centered and starting 13 lines from the top of the page
- (2) An initial quotation centered and starting 13 lines from the top, along with its attribution as a footnote on the same page, such as:

The fear of speculation, the ostensible rush from the theoretical to the practical, brings about the same shallowness in action that it does in knowledge. It is by studying a strictly theoretical philosophy that we become most immediately acquainted with ideas, and only ideas provide action with energy and ethical significance.

Schelling\*

- (3) A section of acknowledgements, treated for style purposes as if it were a major section of the thesis.

\*Schelling, F.W.J. Works, Munich, Beck, 1959, 3:299.

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<Page 1 of the thesis goes here>

## 8. Forms

### Master's Thesis Topic Approval Form

Student's Name: \_\_\_\_\_

Date \_\_\_\_\_

Thesis Topic Description: (thesis director signed copy must be attached)

Thesis Director Name: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Thesis Committee Member Name: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Thesis Committee Member Name: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Department Chair-person: \_\_\_\_\_

Approval Signature: \_\_\_\_\_ Date: \_\_\_\_\_

CCSE Dean: \_\_\_\_\_

Approval Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**Program of Study Form**

Available at: <http://graduate.kennesaw.edu/students/docs/Program%20of%20Study%20v2.pdf>

**Committee Approval Form**

Available at:

<http://graduate.kennesaw.edu/students/docs/Committee%20Approval%20v2.pdf>

## External Thesis Committee Member Approval Form

Committee Member Name: \_\_\_\_\_

Title: \_\_\_\_\_

Affiliation: \_\_\_\_\_

Formal Education:

BS/BA School & Major: \_\_\_\_\_

MS/MA School & Major: \_\_\_\_\_

PhD/Doctoral School & Major: \_\_\_\_\_

Reason for choosing this committee member:

Any funding or compensation required:

Source of such funding or compensation:

Student's Name: \_\_\_\_\_

Thesis Director's Name: \_\_\_\_\_ Signature: \_\_\_\_\_

CCSE Dean's Approval Signature: \_\_\_\_\_ Date: \_\_\_\_\_

## Master's Thesis Results Report

Student's Name \_\_\_\_\_  
Last
First
M.I.

Student ID Number \_\_\_\_\_

Student's Master's Thesis Title \_\_\_\_\_

Committee Members (printed names)

Employer if appropriate

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

	Content Grade (S/U/IP)	Writing Grade (S/U/IP)	Signature
Thesis Director	_____	_____	_____
Committee Member	_____	_____	_____
Committee Member	_____	_____	_____

Overall Grade (S/U/IP): \_\_\_\_\_

\_\_\_\_\_

Thesis Director Signature Date

This is to certify that the student has completed all requirements of the thesis, including a successful defense, satisfactory final editing of the thesis, and submission of an adequate number of copies (including at least one on acid-free paper) to the library. The student is being granted credit for \_\_\_\_\_ hours of thesis, by changing his/her grade to S.

\_\_\_\_\_  
 Graduate Coordinator/Department Chair's Signature

\_\_\_\_\_  
 Date