

CSCI Department of Computer Science

Minimum Standards for Project/Thesis Projects

The purpose of a graduate project is to demonstrate that the student exhibits the qualities of a Computer Science professional. This means that the student must be able to integrate a great deal of information from many sources, plan a study, and prepare a formal research report summarizing his/her findings. The report must tie the specific of what the student has done in the project or thesis to the larger body of literature (articles, texts, etc.) that the student researched.

Proposals: A project/thesis proposal must be thoroughly researched and developed and must meet the conditions set by the Department of Computer Science. Please read the following:

“Students who select the thesis or project as their culminating activity are urged to complete it during the semester they are enrolled in the designated course (customarily taken during the last semester of the master’s program). In cases where the thesis or project is not completed during enrollment in these units, students are allowed a maximum of three additional semesters to complete the thesis or project. If the thesis or project is not completed by this deadline (and the program time limit has not run out), members of the committee can choose to withdraw. In the case of a faculty member withdrawing, it is the responsibility of the student to reconstitute the committee. Exceptions to the policy on Graduate Advisory Committees may be requested by the graduate program coordinator and must be approved by the dean of Graduate Programs.” -- Page 6, Guide to Graduate Studies.

“The research proposal is a conceptual statement of a problem that warrants significant study. The graduate student should work with the graduate advisory committee in developing a research proposal and receive approval from the committee before research begins.” -- Page 27, Guide to Graduate Studies.

TO ENROLL IN CSCI 699 P/T, YOU MUST HAVE COMPLETED THE FOLLOWING:

- GRADUATE WRITING EXAM OR CSCI305/EECE335.
- A PROPOSAL SUBMITTED AND APPROVED BY YOUR ADVISORY COMMITTEE AND 2/3 OF THE COMPUTER SCIENCE FACULTY.
- COMPLETED THE GRADUATE CORE COURSES AND HAVE MET ALL CONDITIONS SET FORTH IN THE MS PROGRAM ACCEPTANCE

LETTER, THE UNIVERSITY CATALOG, AND THE GRADUATE
POLICY GUIDE.

Consider the following before you begin to write your proposals and consult this list as you proceed:

- The project should be explained clearly and in sufficient detail for a reader who is not familiar with the project to understand what is being proposed. It is better to include more meaningful information than to assume the person reading your proposal will be able to read those details between-the-lines.
- To an extent, the complexity of a project is a measure of how much it extends the ideas that define Computer Science and our Computer Science curriculum. Complexity, therefore, plays a significant role in the level of a project and, in turn its approval. Your project must be complex enough to be considered for a Masters project.
- Be aware of style, including grammar, spelling, sentence construction, and the general "professionalism" of the document.
- Understand the main purpose and focus of your project. *Note: You should have the background necessary to complete your project by the time you submit the project proposal.*
- If the project involves writing software for real end users or a client, then there should be clear plans for getting input and evaluation from the client or end users at various stages of the project.
- The relationship of your project to Computer Science should be clear. The focus of the project could be aligned with one of the content areas of our courses or any other traditional area of Computer Science.

Proposal Format:

The proposal should include a title page, a table of contents, and a bibliography. If there are any diagrams or figures they must be produced electronically (not hand-drawn) or copied unless referenced. The proposal should be double spaced in 12 point font with 1" margins on all sides. The Proposal should use a format similar to the one that will be used for Master's Project/Thesis write-up itself, and is generally expected to mass more than 8 pages, double spaced.

Your proposal must have the following components components:

Cover Page: The cover page will include the project title, the author's name, the date, The Department, and the names of the Committee Chair and Committee Member. The Title should be as specific as possible: for example, the title "A Comparison of the Costs and Benefits of using Microsoft .NET Web Services,

with the Open Source Web Service Tools Provided with J2EE, With Sample Implementations in Both Environments” would be a much better title than “Comparing Web Services and Distributed Computing in Two Environments”.

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Introduction: In this section, the student will present a clear idea of what needs led up to proposing this project.

Purpose: The introduction should include a statement of the general objectives in doing this project – what is the Project/Thesis proposing to accomplish here? (Are you trying to apply a new technology? Are you trying to see if a new algorithm works? Or . . . what?)

Problem Statement: The introduction should also include a statement of the specific problem or problems that the project addresses. (What is the underlying issue that led to proposing this project? Is there a strong need for the application, or is there a gap in the knowledge of how to apply a given algorithm or methodology?).

Literature Review: In the Literature Review portion of the proposal, the student will survey a portion of the published work (generally **at least 12 articles** from refereed journals and textbooks/monographs) that provide context for the current problem. This might include work in software engineering, database work, and published work, both general and specific, that relates to the problem and past solutions to the problem. If the student uses web references, be sure that the reference is to a permanent document. (Sun, Intel, and other sources will post controlled documents, with document numbers, on their websites, and these should be referenced listing author, publication number, company, and publication date, along with the URL and date of access.)

Solution Description: In this section, which can also be entitled “Method”, the student will describe what he/she will do to address the problem and meet the project objectives, building on the foundation of the work that has cited in the Review of the Literature.

Required tools and availability: This section should describe the software and hardware you will need in order to complete the project, and also explain how you will access that equipment. This includes the language or languages you will use to implement your project. Don't just say "C++" - instead explain whether you are using Borland C++ or Visual C++ on a PC, gnu C++ on a Linux machine, etc.

Schedule: In this portion of the proposal, the student will list the various parts of the project, including additional research, and the planning, development,

installation, and testing of the project, plus the writing of the various components (chapters) of the final project report, and specify the dates by which he/she intends to complete each. You must phrase your checkpoint items in terms of tangible deliverables that can be demonstrated.

Reference List: This lists, in IEEE or ACM journal form, the sources that the student has referenced throughout the proposal. Please note that this is NOT a bibliography, and each reference is linked to specific citations in text, As noted above, references to at least 12 refereed journals and textbooks/monographs are required. The student may wish to provide a bibliography as well..

Annotated Bibliography: The annotated bibliography is a list of all of the related research materials that the student is aware of that relate to his/her general research area along with comments as to why each entry is important. This list may be much larger and less specific than the reference list, and entries are not linked to the body of the text via citations, although entries on the reference list may also be entered here.

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Appendices.

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