Guidelines for completing a Masters Thesis in Dr. Mason’s lab

Thesis Requirements
This document defines the requirements for completing a Thesis Option Masters degree with Dr. Mason as a thesis advisor. Failure to comply with the guidelines established herein could result in delays or even cancellation of your thesis research. It is the responsibility of the student to review, understand, and act on the information provided in this document.

Documentation Timeline
For timely completion of a Thesis Option MS degree, Dr. Mason requires several documents and presentation to be during the thesis research effort. The table below lists several important documentation/presentation deadlines. Failure to complete these deadlines may result in the delay of the thesis defense.

<table>
<thead>
<tr>
<th>Document</th>
<th>Due Date [time before thesis defense]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Begin Preliminary Work (no document required)</td>
<td>10 months</td>
</tr>
<tr>
<td>Thesis Proposal</td>
<td>8 months</td>
</tr>
<tr>
<td>Progress Presentation</td>
<td>6 months</td>
</tr>
<tr>
<td>Dissertation Introduction</td>
<td>4 months</td>
</tr>
<tr>
<td>Progress Presentation</td>
<td>3 months</td>
</tr>
<tr>
<td>Full Dissertation Draft</td>
<td>5 weeks</td>
</tr>
<tr>
<td>Final Dissertation</td>
<td>3 weeks</td>
</tr>
<tr>
<td>Defense Presentation</td>
<td>2 weeks</td>
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</tbody>
</table>

Typically, MS students plan for a May graduation (Spring semester) and will begin their thesis research effort during the previous Summer or Spring term. By the beginning of the Fall term, students should have a well-defined thesis topic and have substantial preliminary achievements in the area of their research. MS degrees may be planned for defense in months other than May, but the timeline above still applies.

Students should never assume that Dr. Mason will provide any financial support for MS projects that go beyond the anticipated thesis defense semester unless arrangements are made before hand.
Thesis Proposal

Purpose:
The thesis proposal helps students to organize their ideas for a thesis topic and collect valuable information which can be applied to the dissertation. This document also establishes an important timeline and ensures the student and advisor know what is expected of each other.

Format:

Cover Sheet
Include the following information: Dissertation title, your name, your department and university, current date, expected defense date, and list of committee members.

Body
The body of the thesis proposal will typically be 3-5 pages and include relevant figures, literature citations, and descriptive text organized into the following sections.

Introduction
Describe the background of your thesis topic, current state of the art in this field, and the motivation for your research. State specific objectives and discuss the significance of achieving these objectives. Include relevant references from published literature.

Work Plan
Describe the tasks to be completed and the goal/purpose of each task, organized into subsections if appropriate. List tools/software that will be used and/or are needed to complete your efforts. Include figures as appropriate.

Work Plan Schedule
Include a table listing all major tasks/efforts to be performed and a timeline for beginning and completing them. The table should also include important documentation milestones.

Example Work Plan Schedule Table

<table>
<thead>
<tr>
<th>Task</th>
<th>months before defense</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>8</td>
</tr>
<tr>
<td>*task A</td>
<td></td>
</tr>
<tr>
<td>*effort 1</td>
<td></td>
</tr>
<tr>
<td>*effort 2</td>
<td></td>
</tr>
<tr>
<td>*task B</td>
<td></td>
</tr>
<tr>
<td>*effort 1</td>
<td></td>
</tr>
<tr>
<td>*effort 1</td>
<td></td>
</tr>
<tr>
<td>Documentation</td>
<td></td>
</tr>
</tbody>
</table>
Chapter 1
Dissertation Draft
Dissertation Final
Defense Presentation

* define using words appropriate for your thesis and add additional tasks and efforts as necessary.

Summary of Anticipated Results
This section should provide a listing (in table or bullet form) of the following

Scientific Contributions
List all major contributions resulting from your thesis work. Include contributions to the
general scientific community, the university and/or research lab, and society as a whole.

Performance Goals
State the anticipated features or performance goals of your research effort.

Deliverables
List all items that will be delivered at the end of your thesis including, design files,
hardware/instruments, documents, and journal/conference papers.

References
Include citation for all literature referenced in your proposal using the standard format
found in electrical engineering journals. References should be cited in the text of your
proposal using the standard number format (e.g., [1]). You may also list additional
references that were not directly cited under a subheading called Bibliography.

Masters Dissertation

MS Dissertations for Dr. Mason should follow the established university/departamental
rules and should be organized as an extended journal paper. Use highly cited journal
papers as references in developing the outline for your dissertation.

Typical Dissertation Outline
The following sections/chapters would typically be included in an MS dissertation:

Introduction
overview of project, motivation, background (literature review), objectives, and
significance of the research
Design Methodology
detailed background information on the problem to be solved, approach taken to solve the problem, challenges to be overcome

Experimental Efforts
description of the research tasks to complete, tools used, issues encountered, etc.

Results
figures, tables of results, evaluation of success of your design effort and discussion of relevant issues that could not be addressed.

Summary and Future Work
project summary statement and discussion of future work to further progress in the area of your thesis.

References
Citations for all literature referenced in your proposal using the standard format found in electrical engineering journals. References should be cited in the text of your proposal using the standard number format (e.g., [1]).