

## EE4023 Thesis II

### Preamble:

This course is the completion of the work proposed in EE 4013 Thesis I. The course components are listed below. While not required as part of the presentation and not part of the marks structure, *each supervisor may require a physical demonstration of the working project before a mark is assigned for the project.* Additionally a thesis supervisor, or the ECE Department, may require development of a web page or a poster presentation of the project.

### Calendar Description:

The approved calendar description is:

#### EE4023 Thesis II

“Completion of work proposed in EE 4013 Thesis I. May involve theoretical and/or computer studies. Supervision is by ECE faculty. A substantial written document as well as a public presentation of the completed project is required. Prerequisite: EE 4013” 4 ch (8L)(W).

#### EE4023 Thesis II Chronological Schedule of Course Components

|   |  |             |  |
|---|--|-------------|--|
| Table of Contents                                 | 30th day of classes of the term by 4 PM, to the Department Office.   | (-5%)       | 1 copy for each supervisor                       |
| Rough Draft - relatively complete and correctable | 20th day of classes before the end of term by 4 PM, to the Department Office (take the last day of classes as one and count back). | (-10%)      | 1 copy for each supervisor                       |
| Presentation                                      | Sometime in the last three weeks of classes in the term.   | 10%         | -  |
| Lab Notebook                                      | Last day of classes in the term by 4 PM, to the Department Office.   | 5%          | 1 notebook for each person in the group          |
| Written document                                  | Last day of classes in the term by 4 PM, to the Department Office.   | 10% writing | 1 copy for each supervisor, and 1 copy for UTEB. |
|   |  | 75% content |  |

- The deadlines are firm. The only basis for extending any deadline is for documented compassionate or medical reasons. Any such requests must be made to the course coordinator.
- If any component of the thesis (other than the Rough Draft components) is handed in late without the above validation, a mark of zero will be assigned to that component.
- If the university becomes closed due to bad weather, all due dates become the next day that the university is open.

## EE4023 Thesis II Lab Notebook

(Value = 5% of Total Mark)

- DUE:** Last day of classes in the term by 4 PM, to be submitted to the Department Office. With the exception of the removal of the Peer Review section, the mark is based on the same criteria and form used for EE 4013, as repeated below.
- TYPE:** Each student in the course must have a bound lab notebook (no loose leaf) to record their individual progress on the thesis.
- FUNCTION:** The Lab Notebook should be a record of the work done by each student. The (bare) minimum requirement should be that it contains a signed and dated record of the weekly progress report meetings with the project supervisor, and the supervisor's comments on the work accomplished. Ideally, there should also be signed and dated records of any work done on the project.
- WHEN USED:**
1. Every time work is done on the project an entry in the notebook should be made.
  2. When preparing progress reports all the relevant material needed should already be collected in the notebook.
- ENTRIES:**
1. **Work entries:** This type of entry must be dated and can contain any or all of the following items:
    - a) brainstorming notes and diagrams
    - b) interactions with partners
    - c) decisions taken
    - d) tests performed
    - e) results and conclusions drawn from tests
    - f) notes from reference material with citations
  2. **Progress report to supervisor:** This entry may be one paragraph or several pages but should describe the progress since the last meeting. It should include a summary, background, facts and outcomes which answer the following questions:
    - a) is your project on schedule?
    - b) what progress have you made since last meeting?
    - c) have you had any problems?
    - d) what are you doing next?
    - e) what are your plans/expectations (cf. Blicq & Moretto, pg. 96)This entry should be signed by the supervisor.

**3. Comments on the progress reports:** This entry could contain comments on the report made by the supervisor before signing and/or your notes of the discussion of your report with the supervisor.

**NOTE:** Students doing their projects off campus will have to copy their progress reports from their notebook to an e-mail. The reply from the supervisor should be written into the lab notebook (if made verbally via telephone) or pasted in (if by fax or e-mail).

## EE4023 Thesis II

### TOC and Rough Draft (0 to -15 Marks)

There are two parts to the rough draft:

1. A point form outline of the final report must be submitted during week six (6) of the term. We want this to take the form of the Table of Contents of the final thesis report, including identifying numbers and associated word titles of the expected headings [i.e., 3.], subheadings [i.e 3.8], and sub-subheadings [i.e., 3.12.5], of the final thesis document. A penalty of five (5) marks will be assessed for failure to submit this document.

**DUE:** 30th day of classes in the term by 4 PM, submitted to the Department Office.

#### 2. Rough (Preliminary) Draft of Report

The “rough” draft is expected to be a relatively complete draft of the final report to be submitted four (4) weeks before the last day of classes. It should include all the text and figures for all sections of the report (except possibly any planned appendices) so that the supervisor can actually correct the document for such things as document structure, content, grammar and spelling. To facilitate corrections the “rough” draft should be typed, and double spaced (using 12 point Times New Roman font for the body of the text).

**NOTE:** A simple table of contents, or an outline, is not acceptable for this submission. Since “positive” marking of a rough draft is difficult, penalty points will be assessed instead. The marking criteria should be based on:

- a. The completeness of the structure, with a -5 marks if it is not complete.
- b. Whether the document is “correctable”, with a -5 marks if it is not correctable.

**DUE:** 20th day of classes before the end of the term by 4 PM, submitted to the Department Office (take the last day of classes as one and count back)

## **EE4023 Thesis II Presentation**

**(Value = 10 % of Total Marks)**

**DUE:** During the last three weeks of the term

### **ORAL PRESENTATION:**

An oral presentation of the overall project to be given approximately three (3) weeks before the last day of classes. The thesis presentations will be scheduled for you and you will be notified of the time and place for your presentation. The marking form is the EE4032 Thesis II Presentation Marking Sheet, which you will be able to see prior to your presentation.

Note that you do not have to do your presentation in PowerPoint or any other presentation software. However, part of the mark for the presentation is based on visual aids, so some kind of vehicle for showing images would be strongly recommended. Suitable overheads are quite acceptable.

### **LENGTH OF PRESENTATION**

1 person: 0 minutes set-up time, 15 minutes, plus 5 minutes for questions.

2 persons 0 minutes set-up time, 30 talk (15 minutes for each person), plus 10 minutes for questions

### **OR**

2 persons: 0 minutes set-up time, 15 minutes talk and 5 minutes for questions for first person, and 15 minutes talk and 5 minutes for questions for second person

**AUDIENCE:** EE 4013/4023 classmates, parents, spouses, friends, undergraduate and graduate students, supervisor(s), UTEB, other faculty.

## EE 4023 Thesis II Presentation Grading Sheet

The presentation grading sheet will be made available in a separate document a bit closer to the time of the presentation.

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## EE4023 Thesis II Writing Structure Evaluation

(Value=10% of Total Mark)

Student # and Name: \_\_\_\_\_

Project: \_\_\_\_\_

Supervisor: \_\_\_\_\_

DUE: Last day of classes in the term by 4 PM, submitted to the Department Office.

### Evaluate the Report Under Each of the Categories Below:

A detailed explanation of what each category evaluates is below the evaluation part of the form.

1. Structure and Organization \_\_\_\_\_(20%)

2. Style \_\_\_\_\_(50%)

3. Contents \_\_\_\_\_(30%)

TOTAL \_\_\_\_\_ (100%)

MARKED BY: \_\_\_\_\_Signature

**Structure and Organization:** Are all of the component parts of the document present? Is it formatted appropriately? Components would include:

- Title Page
- Abstract or Summary
- Table of Contents — suitably formatted to indicate sections, and sub-sections, including page numbers.
- List of Figures, List of Tables — should show table numbers, captions, and page numbers.
- Introduction or Background
- Statement of the Problem
- Main Body of Report — includes what you did, how you did it, what the results were, and your evaluation of the results. Figures and Tables — properly numbered in sequence using separate number streams for figures and tables. Appropriate captions. Supplementary figures and tables properly located in the Appendixes)
- Equations, if any should also be numbered in sequence.
- Conclusions/Discussion
- References — all references numbered according to IEEE format, included in text, and properly listed.
- List of Work Done — in point form as Appendix 1.

**Important Note:** These are the “mechanical” parts of the thesis which should be present to make it complete, easy to read, and easy to follow. However many of the headings listed here are not suitable section titles. Section and sub-section names should be chosen with consideration of the content.

**Style:** Is the writing of suitable quality? Considerations would include:

- Grammar, syntax, spelling, appropriate use of words and terminology, sentence structure, and general readability.
- Is the writing focused (no irrelevant material), the information accurate, logically organized, clear, concise, and free of needless repetition.
- Have you removed colloquial expressions, idioms, and turns of phrase that are appropriate for spoken English, but not for formal writing.
- Are verbs in the appropriate tense? (This is a HUGE problem area for many students. Get the past, present and future sorted out.)
- Are included figures and tables properly referenced in the text?

**Contents:** Are all of the component parts of the document performing the required function? Some of the considerations include:

- Is the summary a real summary, or a table of contents written in prose? This should summarize the project, not list the components of the document.
- Is the history or background given directly relevant to the project? Is any previous work done by others discussed, including the limitations of that work, and how it might relate to or contribute to current work?
- Are the goals and objectives concisely and clearly stated?
- Is it clear from the discussion
- Is there an appropriate description of work performed? Are the design approach and methods used clearly outlined and justified, including where appropriate comments on technologies, instrumentation, software, assumptions, and approximations? Are the phases of analysis, design, implementation, simulation, test/evaluation clearly outlined as appropriate?
- Are your results correctly interpreted and valid conclusions drawn? Are limitations and contributions highlighted? Is there a clear statement of the success or failure of the thesis (related to the statement of the objectives). Is future work suggested?



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## EE4023 Thesis II Content Evaluation Form

(Value = 75% of Total Mark)

Student # and Name: \_\_\_\_\_

Project: \_\_\_\_\_

Supervisor: \_\_\_\_\_

DUE: Last day of classes in the term by 4 PM, submitted to the Department Office

**Evaluate the project under each of the 4 categories below, with reference to and consideration of the sub headings given.**

**1. Problem Statement** \_\_\_\_\_ (10%)

1. Context and scope established
2. Relationship to previous work established
3. Feasibility of objectives established
4. Deliverables established

**2. Methodology** \_\_\_\_\_ (10%)

1. Methodology explained
2. Methodology justified
3. Facilities and equipment identified
4. Logical plan outlined

**3. Design Content** \_\_\_\_\_ (20%)

1. Evidence of design of one or more of: hardware, software, a process, an experiment, a clinical technique, or other valid design activity
2. Evidence that a design process was followed Effective implementation of the design
3. Effective implementation of the design

**4. Work Done (including a work summary, dated in a table in Appendix)** \_\_\_\_\_ (40%)

1. Analytical (assumptions, observations, equations) phase completed
2. Simulation/CAD (hardware, software, models) phase completed
3. Implementation (hardware, software technologies, cost) phase completed
4. Test/Evaluation (experimental design and procedures, completeness, rigour, performance measures) phase completed

**5. Results** \_\_\_\_\_ (20%)

1. Performance demonstrated
2. Limitations demonstrated
3. Results discussed and interpreted.
4. Evaluation of the success of the project
  - were deliverables delivered?
  - was the hypothesis proven or disproved?

**TOTAL** \_\_\_\_\_ (100%)

MARKED BY: \_\_\_\_\_ Signature

**Important Note:** These are the details of the fundamental content which we will be looking for in the thesis. However the headings here are not suitable section titles for your thesis. The idea flow, material sequencing, and overall structure should be as given in your Table of Contents.