



Santa Clara University
Department of Electrical Engineering

INSTRUCTIONS FOR PREPARATION OF SENIOR PROJECT REPORT

CHAPTER 1. GENERAL INFORMATION

The original records of the investigation and the completed project are the property of Santa Clara University and must not be taken from the University without special permission from the Department. Publication rights in the dissertation are reserved for the author, but permission to publish must be secured from the Chair of the Department.

The original manuscript and one copy of the report must be deposited with the Department (the copy will be kept in the Department Archives and the original will be sent to the University Library where it will be available to library users). The report must be typed or word-processed. It is assumed that almost all reports will be word-processed. It may be reproduced by high-quality photo-copy or a similar method, providing the lettering is black and the copy is clear. The manuscripts submitted to the Department are to be bound in black, front and back, with no lettering on the outside.

Note that these instructions have been laid out in a Chapter and Section format that you could use if you wish.

CHAPTER 2. FORMAT

2.1 PAPER.

The paper must be 8-1/2 x 11 inches. The original and one copy must be deposited with the Department. The original must be typed or printed on 20 weight (or heavier - 25% rag content is preferred for MS and Ph.D. Theses) white bond paper. (e.g., high-quality photo-copy paper is acceptable).

2.2 MARGINS.

All pages must have at least a one-inch margin (one and one half inches for M.S. and Ph.D.) on the left side and no less than a half-inch margin on the other three sides. (This half-inch minimum applies to the longest typed lines.) Wider margins may be used if desired; narrower margins are not acceptable.

2.3 TYPING.

Elite, pica, or other standard type may be used, but the same typeface must be used for all pages of the report (figures and headings excepted). Italics may be used for emphasis. The general text of the manuscript should be double-spaced. Corrections must be made by reprinting the document; interlinear corrections or those made by hand or by strikeovers on the typewriter are sufficient reason for rejecting the report. Laser printed copy is preferred.

2.4 PAGINATION.

Page numbers must be typed within the prescribed margins, in the upper right hand corner at least two lines above the first line of text. If you are using a word processor that places numbers at the bottom of the page, this is acceptable.

2.4.1. PRELIMINARY PAGES. Do not type any number on the certificate of approval or on the title page. The next page (e.g., the table of contents) is number “iii”, and all other pages of the preliminary material are numbered consecutively in small Roman numerals.

2.4.2. Use Arabic numerals beginning with number “1” on the first page of the text and continuing throughout the rest of the report including the reference material. Every page, after the title page, must be numbered. The first page of a chapter or section may be numbered in the center of the bottom of the page, if the author desires, but all other numerals must be in the upper right hand corner as described above (unless using a word processor - see 2.4 above).

2.5 DIVISIONS.

A report generally is divided into three parts: The preliminary pages, the text, and reference material.

2.6 PRELIMINARY PAGES.

The preliminary pages must include the certificate of approval, the title page, and the table of contents. An acknowledgment is optional.

2.6.1. SIGNATURE APPROVAL FORM. This form has a set format. You are required to use the format shown in *Attachment A1 through A4* of this document, choosing the specific page that represents the degree you are seeking. You should create this form, in the exact format of the example, with your word processor - using your own typeface. The signature approval form must be the first page in each of the two copies of the report deposited with the Department. The signature form in both copies must be signed (original signatures) by the person under whose immediate supervision the report was prepared, and by the Department Chair. The department administrative assistant will assist in obtaining the Chair's signature.

2.6.2. TITLE PAGE. This form has a set format. You are required to use the format shown in *Attachment B* (page 10) of this document to create your own title page. The title page is the second page in each of the two copies of the report deposited in the Department. The date appearing on the title page must be the year in which the degree is to be conferred. A *sample* title page with proper addition of title and author is included as *Attachment B*.

2.6.3. ACKNOWLEDGMENT. This section, if included, follows the title page. It is a brief acknowledgment of the assistance given to the candidate in the research and in the preparation of the report.

2.6.3. TABLE OF CONTENTS. Each report must have a table of contents which shows the principal divisions of the report. These divisions must agree, in wording and style, with the divisions shown in the text. A list of tables and a list of illustrations may be included if desired, preferably as separate pages rather than as part of the table of contents page. A typical Table of Contents is shown in *Attachment C* of these instructions.

2.6.5. ABSTRACT. An abstract must be included in the report. This abstract is to be double-spaced and must not exceed 600 words. The abstract is an independent stand-alone document that describes what the report is about, and what were the primary results. It is not the introduction to the report. The abstract is one of the preliminary pages and should be numbered as such. A sample abstract is shown as *Attachment D*.

2.7 TEXT. THE TEXT IS TO BE DOUBLE SPACED

The text is the main body of the report. In it, the problem is stated, the method is described, the results of investigation are presented, stated, the method is described, the results of investigation are presented, analyzed, and discussed, and the findings are summarized and interpreted. The detailed organization of the text will vary with reports in different subjects, but a consistent style must be followed. In general, the organization should follow that which is considered standard in the particular area.

In many cases, the main body of the report may have to include certain materials other than ordinary text, such as illustrations, tables, chemical and mathematical formulas, and footnotes. Note the following comments concerning the presentation of these items.

2.7.1. ILLUSTRATIONS. All illustrations used in the report must appear in both copies. Illustrative materials may be drawings, charts, diagrams, photographs, and Photostats, or, if necessary, other types which may be approved by the Department. Illustrations may be inserted whenever needed in the text; they should be consecutively numbered throughout the report.

All illustrations must be designed so that the plate and caption can be placed on the page within the prescribed margins.

Computer printouts may be photographically (photocopy) reduced to 8-1/2 x 11 as long as copies are clear, centered and without additional "photo lines."

Folded illustrations may be inserted if necessary. The sheet must be folded in such a way that it can be bound in the report and easily unfolded. Illustrations too large to be folded in the report may be put in an envelope no larger than 6½ x 9 inches. This envelope should then be mounted on paper of the proper weight for insertion in the report. For further information, check with the Department.

Illustrations smaller than page size should be mounted on the same paper used for the report. Such illustrations should be firmly mounted and dried under pressure to prevent curling of paper. Photo mounting corners, "Scotch tape", or staples should not be used.

Lettering and lines that cannot be typewritten on illustrations should be inserted in black ink, preferably India ink. Felt-tip pens that produce a line wider than that produced by a ballpoint pen are unacceptable.

Figures are numbered and titled at the bottom.

- 2.7.2. TABLES. Be sure that tables can be read easily. Headings and the column and row entries should be clearly related. Ordinarily, vertical rules are not necessary, but in an extensive table they may be desirable. Rules should be printed, typewritten or drawn with India ink. Tables larger than a half page are better if placed on a separate sheet; half-page or shorter tables may be centered on the page with text above and below. Very large tables may be folded as described above for large illustrations.

Tables are numbered and titled at the top. All tables should be numbered consecutively throughout the report.

- 2.7.3. FORMULAS. Mathematical formulas should be carefully made by typewriting, hand lettering, or word processing. Complex formulas of two or more lines should not be included in text lines but placed in the proper position in the center of the page between lines of text. The lines in hand-lettered formulas must be in black ink, preferably India ink. Felt-tip pens that produce a line wider than that produced by a ballpoint pen are unacceptable.
- 2.7.4. FOOTNOTES. Footnote references must follow a consistent style throughout the report. If there is a standard practice in the subject field, that method may be used. Ordinarily, footnotes are numbered consecutively throughout each chapter or main division. Footnotes should be placed at the bottom of the page; a partial or complete horizontal line one space above the first line of the footnote must separate the footnotes from the text.

2.8 REFERENCE MATERIAL.

Reference material includes:

- 2.8.1. BIBLIOGRAPHY. The bibliography should be arranged in a definite order, either alphabetical or chronological, and single-spaced, with double spacing between entries. All books, articles, and other material used in preparing the report should be listed in the bibliography, and a consistent style should be followed.

2.8.2. APPENDIX. In some reports it may be desirable to include certain material, e.g., test forms, blank record forms, detailed apparatus descriptions, extensive tables of data, etc., which does not actually form a part of the text. Such materials should be made part of the report as one or more appendices, designated by capital letters, which are usually placed after the bibliography. Forms must have adequate margins, and sheets larger than the report page must be folded in the manner described above for illustrations.

2.9 FINAL COPY BINDING.

2.9.1. UNDERGRADUATE SENIOR PROJECT (THESIS)

The final copies (2) must be bound in a plain BLACK binding - both front and back covers must be solid black. The binding may not be of the "loose-leaf" type. Bindings that confine the pages so that they do not come out easily are acceptable. No labels or titles are to be placed on the outside cover.

2.9.2. GRADUATE MASTER OR Ph.D. THESIS

Further instructions and "Thesis Submission Form" are available from the Department office. The thesis is submitted after signatures but before binding. The library does the binding and microfilming as required. Binding is done in Red with gold letters on the front and on the spine. Students must submit 2 copies for the library, one copy for the department, and as many copies as the student needs for personal use. Student copies will be bound and returned by mail to the address given on the Thesis Submission Form. One additional copy of the Ph.D. thesis must be submitted for Microfilming. Please discuss this process with the Department Administrative Assistant since you will be required to follow a strict procedure.

CHAPTER 3. INTERPRETATIONS

In case of confusion or uncertainty about the rules of presentation, the student should consult with the advisor who is the final arbiter of any such questions.

CHAPTER 4. INTERDISCIPLINARY TEAM REPORTS

In the case of teams composed of students from more than one department, the team will submit one copy for each department plus the original required for the Library. The signature page and the title page must contain the names of all of the team members and all departments involved. The signature page must have a signature line for each of the advisors and chairs from all departments represented.

SANTA CLARA UNIVERSITY
Department of Electrical Engineering

Date: _____

I HEREBY RECOMMEND THAT THE THESIS PREPARED UNDER MY SUPERVISION BY

ENTITLED

BE ACCEPTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE

OF

BACHELOR OF SCIENCE IN ELECTRICAL ENGINEERING

Thesis Advisor

Chairman of Department

SANTA CLARA UNIVERSITY
Department of Electrical Engineering

Date: _____

I HEREBY RECOMMEND THAT THE THESIS PREPARED UNDER MY SUPERVISION BY

ENTITLED

BE ACCEPTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE

OF

MASTER OF SCIENCE IN ELECTRICAL ENGINEERING

Thesis Advisor

Thesis Reader

Chairman of Department

Attachment A2 – SAMPLE - Certificate of Completion

SANTA CLARA UNIVERSITY
Department of Electrical Engineering

Date: _____

I HEREBY RECOMMEND THAT THE THESIS PREPARED UNDER MY SUPERVISION BY

ENTITLED

BE ACCEPTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE

OF

ENGINEER OF ELECTRICAL ENGINEERING

Thesis Advisor

Thesis Reader

Chairman of Department

SANTA CLARA UNIVERSITY
Department of Electrical Engineering

Date: _____

I HEREBY RECOMMEND THAT THE THESIS PREPARED UNDER MY SUPERVISION BY

ENTITLED

BE ACCEPTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE

OF

DOCTOR OF PHILOSOPHY IN ELECTRICAL ENGINEERING

Thesis Advisor

Thesis Reader

Chairman of Department

Thesis Reader

Thesis Reader

Thesis Reader

Attachment A4 – SAMPLE - Certificate of Completion

VOLTAGE PROBABILITY DISTRIBUTION DISPLAY

BY

Archie Del Marez

DESIGN PROJECT REPORT

Submitted in Partial Fulfillment of the Requirements
for the Degree of Bachelor of Science
in Electrical Engineering
in the School of Engineering of
Santa Clara University, 1992

Santa Clara, California

Attachment B – SAMPLE - Title Page

TABLE OF CONTENTS

	<u>Page</u>
Chapter 1. Introduction	1
Chapter 2. Filter Theory	4
2.1 Transfer Functions	5
2.2 Bandpass Filters	7
2.3 Butterworth Filters	8
2.4 Time Response.....	10
Chapter 3. Filter Design	12
3.1 System Block Diagram	14
3.2 Design Procedure	15
3.3 Component Integration	19
Chapter 4. Testing	22
4.1 Test Setup.....	24
4.2 Results ..	26
Chapter 5. Conclusion.....	30
Bibliography	33
Attachments A-D	

Attachment C – SAMPLE - Table of Contents

(Note the alignment of section numbers, page numbers, and dots.)

VOLTAGE PROBABILITY DISTRIBUTION DISPLAY

Archie Del Marez

Department of Electrical Engineering

Santa Clara University, 1992

ABSTRACT

Attachment D – SAMPLE - Abstract

(The abstract page must have a heading, which includes the title, author, place, and date as shown in the example above.)