

THESIS WRITING GUIDELINES FOR SENIOR AND SOFTWARE ENGINEERING PROJECTS

The most difficult part of writing a thesis for your Final Year Project or Software Engineering project is often 'where to begin'. Here are a few tips to help you:

1. Think of a topic in your course that you have found particularly interesting. This may be a chapter or an issue in a book associated with your course. Or it could be the whole or part of an assignment that you wished to explore in more detail. On the other hand, there may be an issue in the news (read a good newspaper regularly!) that excites your attention. Your chosen advisor can help you with this and give you some ideas if necessary.
2. Make sure that the issue is **researchable**. This means that there must be a **literature base** either in textbooks or periodicals.
3. Be prepared to spend several hours in an academic library and/or the internet to help you search out good sources on your intended topic. Remember the Internet is good for some things but there is no 'quality control' so some of the articles you get might be too ephemeral or journalistic for an academic piece of work.
4. It is probably better to think of the whole of your project as essentially **answering a question** rather than researching a field.
5. Make a plan of the chapters. Your plan is likely to look like this:
 - Introduction
 - Literature review
 - Updating/applying new research
 - Recent developments
 - Case study/small survey
 - Conclusion
6. Think of reading around the subject and writing your initial plan as a process in which each activity reinforces the other in a circular process. Do some initial research, then make a tentative plan, then do more reading to 'flesh out' the plan, then revise the plan and so on. Your plan only needs to be tentative at this stage - in all probability it will actually get revised as you make progress through your project. You should provide your supervisor with a copy of your plan on your first substantive meeting.
7. Do not think you have to do all of the reading around the topic before you start to write. Read or research sufficiently to write the first chapter (literature review – look: Writing a Literature Review) and then start writing a first draft.
8. When you start writing, set yourself a target - say 500-1000 words per day and then you will feel that you are making progress

GETTING STARTED

All undergraduate theses must be formatted in a consistent manner so that evaluations are based on content, not presentation. The following section defines this format.

1. Title page

The title page should contain the title, the name of the author, the degree(s) to be awarded at FUC/FIT, the date the degree(s) will be conferred, and names and signatures of the author, supervisor, and the department Undergraduate Committee.

The preparation of the thesis is a process of investigation and discovery, the precise scope of your study may well only emerge as you become closely involved in a detailed review of the literature. At this early stage, your title may be a provisional one that you will revise later. Your thesis supervisor may advise on the title in order to help you find and define the focus of the thesis.

You should examine articles in scholarly journals for examples of appropriate titles for a study of this length.

2. Acknowledgements

Each thesis may contain a short biography of the candidate, including institutions attended and dates of attendance, degrees and honors, titles of publications, teaching and professional experience, and other matters that may be pertinent. This space may also be used to give acknowledgement to those who have helped in the preparation or process of the thesis. This section may be single spaced.

3. Abstract

Abstracts are important because they give a first impression of the document that follows, letting readers decide whether to continue reading and showing them what to look for if they do. Though some abstracts only list the contents of the document, the most useful abstracts tell the reader more.

4. Table of Contents

A list of all chapters and/or subsections within the thesis should be provided. This will prepare the reader for the organizational scheme of your thesis.

5. Table of Figures

A list of all the figures in the document

6. Main Document

7. Appendices

FORMAT OF THE DOCUMENT

Page Numbers

All page numbers should be placed bottom center with a 1" margin beneath. The entire thesis (every single page) must be paginated in one consecutive numbering sequence, with the number printed on each page. The title page is always considered to be page 1, and is the only page that does not require that the page number be included. Every page must be included in the count regardless of whether anything is physically printed on the page.

Footnotes.

All footnotes must appear at the bottom of the page. Footnotes should begin renumbering with 1 at the beginning of each new chapter. Footnotes may be continued on the next page, but must begin on the page they are cited. Endnotes will not be allowed.

Page layout (margins, header, footer, line spacing)

Top, bottom, and both side margins must be at least 2,5 cm to allow for binding and trimming. All information (text headings, notes, and illustrations), excluding page numbers, must be within the text area.

The thesis text should be double-spaced, although peripheral parts like the abstract, title page, acknowledgments, table of contents, bibliography and appendices should be single-spaced.

Typeface and Size

The typeface (font) should be clear and professional in appearance. Specifically, you should choose a serif font, size 10, 11, or 12.

The main body of the text, including appendices, title page and table of contents, should use a font size 11-point or greater. Notes, figure captions and the text in tables, etc., should use a font size 10-point or greater.

Figures and Tables

Figures and tables can be embedded in the text or collected at the end, but embedded is preferred. If you are having difficulty embedding tables or figures, remember that the content is most important.

If tables and figures are embedded, captions should appear directly below the figure or and above the table. If collected at the end, captions should precede the figure or table. Captions should completely and accurately explain the content of the image in a few sentences. If the caption grows too long, maybe the figure is too complicated.

Charts, tables, figures and graphs should not be hand-labeled. No material should be taped or glued to pages.

Separate lists of figures and tables are necessary and should follow the Table of Contents.

Appendices

The same paper size, pagination, margin, and illustration requirements apply to appendices. They support the research in your thesis and should be as readable and reproducible as the rest of your work.

Corrections

Correction fluid; hand-written corrections are not permitted.

Page limitations

Though there is no minimum or limit, most theses range between 30 and 40 pages for all material.

Supplementary Media

You may submit CD-ROMs, floppies, videocassettes, etc., with your thesis, but the written portion must make sense by itself.

ELECTRONIC VERSION OF THESIS

The department will post your work as example and reference to other students. You must also submit your theses and presentations as .pdf files.

The electronic version of your thesis must be an exact copy of the word processor file rendered as a single Adobe PDF file. This single file must include all tables, figures, and appendices.

You must also submit a separate file (in pdf form) of the abstract of your thesis. This will be placed on the department website along with your thesis. The abstract will let the readers know what the thesis is all about.

THESIS CONTENT AND ORGANIZATION

The thesis write-up is the fundamental record of your project. Though we do not mandate a particular organizational scheme, it is important to structure your paper clearly and logically. The report should include:

- a clear statement of the problem and why it is of interest or importance
- a description of the history and background literature on the subject
- a statement of the author's work and observations
- a discussion of the author's findings in relation to those of predecessors
- the author's conclusions and suggestions for further work
- a bibliography of cited references

Extensive data, code, or mathematical derivations should be in appendices rather than in the body of the report. The report must be well written, clearly organized, and contain no stylistic or grammatical errors.

IMPORTANT: Supervisors require early drafts, provide criticism and suggestions. The technical content may require re-writes. The supervisors will insist that the final document conform to the accepted standards of technical writing.

Use direct and clear language. You should not approach word selection as a way to impress your reader. Let your ideas do that after you have carefully expressed your thoughts. Use adjectives sparingly. Words have inherent power; trying to inflate them can end up weakening them. A word to avoid is "one," as in, "one can clearly see that." It is also a good idea to avoid using the same words or phrases more than once or twice in a paragraph. Such redundancies are evidence of a poor proofreading job.

Your work will be a valuable research tool for other scholars only if it can be located easily. Be sure to select a title that is a meaningful description of the content of your manuscript.

Each thesis must include an abstract, preferably one single-spaced page (generally between 300-400 words). The abstract should be a brief descriptive summary rather than a lengthy introduction to the thesis. It may be helpful to reread your Thesis Proposal. The abstract should immediately follow the title page.

CITING REFERENCES

Since the foundation of a thesis relies on pre-existing knowledge, there will probably be a great deal of information in your paper that came from the work of other people. Scholastic ethics require that we give sufficient credit to the work of those who provide the foundation upon which we build.

Therefore, information, ideas or phrases obtained from existing literature should be adequately cited within your text. The citation also points readers toward further information regarding a topic you will not provide a full explanation for.

Citations within the text are used to:

1. indicate the source of information, data, or a concept if not new or original
2. give the reader other sources from which s/he can learn more
3. save space by referring to material elsewhere instead of having it in the body of the text
4. give a historical perspective or show very recent developments
5. allow the reader the opportunity to confirm your interpretation of another 's work
6. help the reader to evaluate the evidence used in your discussion by comparing it to others' work
7. indicate your familiarity with previous and current work in a topic area.

As part of his/her research, the author must assess the quality and accuracy of the sources and references used. If a genuine controversy exists the author should acknowledge it by citing appropriate conflicting opinions. Citations should refer the reader to the original source of the concept or results being discussed. If it is very inefficient or not possible to cite original sources, or if the concept being discussed is very broad, an authoritative review paper or book may be cited. Especially be cautious and judicious in using Internet sources. When at all possible, use citations to reputable refereed journals, either in print or on-line. When the source has not been reviewed as part of a publication process, the citation should be viewed as a personal communication. In general, authors should choose the most authoritative permanently archived source available.

Many students mistakenly believe that citations are required only when quoting another author's work. On the contrary, a citation must be included within the text of your paper for all statements of fact, or ideas, acquired from outside sources -- even if you do not quote the source directly. The only exception is when the information is common knowledge and cannot be attributed easily to a single source (e.g., "Cyprus is an island"). Your reference list must include all the sources cited in your paper -- in the text, figures, tables, etc. -- and nothing more. During proofreading, it is crucial that you compare your citations and your reference list to ensure that they correspond exactly.

REFERENCES

References to sources should be numbered sequentially by order of mention in the text, with the number placed in brackets and printed on line (not as a super- or subscript) like [1]. The list of all references used in the text should appear in numerical order of mention at the end of the document as a separate chapter. References must follow the IEEE reference format.

Below are some examples of references you might use:

Books

[1] E. R. Tufte, *Visual Explanations: Images and Quantities, Evidence and Narrative*. Cheshire, CT: Graphics Press, 1996.

[2] J. H. Watt and S. A. van der Berg, *Research Methods for Communication Science*. Boston, MA: Allyn and Bacon, 1995.

[3] M. S. MacNealy, *Strategies for empirical research in writing*. Boston: Allyn & Bacon, 1999.

Articles/Chapters in Book

[4] J. W. DuBois, S. Schuetze-Coburn, S. Cumming, and D. Paolino, "Outline of discourse transcription," in *Talking Data: Transcription and Coding in Discourse Research* (J. A. Edwards and M. D. Lampert, Eds.). Hillsdale, NJ: Lawrence Erlbaum Associates, 1993, pp. 45-89.

Articles in Periodicals (journals, magazines, etc.)

[5] R. C. Carter, "Search time with a color display: Analysis of distribution functions," *Human Factors*, vol. 24, no. 3, pp. 302-304, 1982.

Papers Published in Proceedings

[6] P. Leone, D. L. Gillihan, and T. L. Rauch, "Web-based prototyping for user sessions: Medium-fidelity prototyping," in *Proc. 44th Int. Technical Communications Conf.* (Toronto, Canada, May 11-14, 1997, pp. 231-234).

Unpublished Papers

[7] K. Riley, "Language theory: Applications versus practice", presented at the Conf. of the Modern Language Association, Boston, MA, December 27-30, 1990.

Technical Reports

[8] K. Kraiger and M. S. Teachout, "Applications of generalizability theory to the Air Force job performance measurement project: A summary of research results," Human Resources Laboratory, Air Force Systems Command, Brooks Air Force Base, Texas, Tech. Rep. AFHRL-TR-90-92, July 1991.

Electronic sources

Give the author, title, type of medium (enclosed in brackets []), volume, issue number (in parentheses ()), page number (if given), and the year and month of publication (in parentheses ()). Then give the full Internet address or the name of the online service provider prefaced by "Available:"

Article in an Electronic Journal

[9] D. Blankenhorn, "Newsproducts: Panasonic debuts first rewritable optical disk recorder," *Newsbytes*, [Online] Vol. 7, Jan. 1990. Available: Knowledge Index File: Newbytes (NEWS 1) Item: 08931265

Other online documents

[10] T. Land, "Web extension to American Psychological Association style (WEAPAS)," [Online document], 1996 Mar. 31 (Rev. 1.2.4.), [cited 1996 Sep. 14], Available: <http://www.nyu.edu/pages/psychology/WEAPAS/>

[11] P. Curtis, "Mudding: Social phenomena in text-based virtual realities," [Online document], Aug. 1992, [1996 Aug 30], Available FTP: [parcftp.xerox.com/pub/MOO/papers/DIAC921992](ftp://parcftp.xerox.com/pub/MOO/papers/DIAC921992)

[12] T. Adamowski, "Writer's resource," in *IEEE PCS Online Discussion Forum*, 14 Dec 1999. [Online]. Available WWW: <http://ieeepcs.org/wwwboard/>.

STARTING TO WRITE THE THESIS

Supervisors have different ways of working and you will, to some degree, need to negotiate your approach to supervision style. For example, your supervisor may advise you to write a short proposal or abstract, say of about 300-400 words, in which you set out as clearly as possible what you intend to do in the thesis. The value of this exercise is that it requires you to focus and articulate your thinking. It may be that you will be able to summarize the exact nature and scope of your study, in which case the proposal can serve as guide to refer to as you write the main chapters of the work. Alternatively, it may make you aware of gaps in your knowledge and understanding, and show you the areas that need further thought and research.

It is useful, therefore, to write the proposal and to retain it for reference and revision. It helps to attempt such an abstract even if your supervisor has not suggested that you write one. However, practice varies, and your supervisor will advise you on how to proceed. As you continue to write the main chapters of the work, you may find that your initial plan has changed. This means that when you have completed the chapters that form the main body of your thesis you can return to the proposal and revise it as much as you need.

It is highly advisable to draft a plan of the thesis. There is a lot in common between different theses regarding the structure and although you do not need to stick slavishly to a standard plan, such a plan is very helpful as a template to impose some order on what may seem an unmanageable task. Here is an indicative structure that might help you with your initial plan. Each section mentioned in Table 1 refers to a chapter in your thesis. You are not limited to these chapters, but you can use this table as a general structure.

Table 1. Thesis Structure

Section	Section Description
Abstract	Abstracts are important because they give a first impression of the document that follows, letting readers decide whether to continue reading and showing them what to look for if they do.
Introduction	The field of study, the research question, the hypothesis (if any) or, more generally, the research question that is to be investigated. It should also include a summary of the contents and main arguments in the thesis.
The Literature Review	Usually, this comes immediately after the introductory chapter. This may be more than one chapter, but should certainly be written in sections. This should include previous work done on the field of study and anything that you consider to be relevant to the hypothesis or research question and to its investigation. It will include a large number of references to the literature in your chosen area. This is one of the most important sections of your thesis.
Methodology	This section should include an account of the research questions and/or hypotheses to be investigated, relevant methods of investigation and an argument for why you think these methods are the most appropriate ones for the question and for your circumstances. You

	should consider the benefits of your chosen method as well as identifying any disadvantages and how you overcame them. Ethical issues and the ways in which you dealt with them should be noted. This section should also discuss any variations from the original fieldwork plan, and should conclude with a reflection on the experience of doing fieldwork.
Findings	This section should present the main findings of your research together with an account of the strengths and weaknesses of your data relative to your research question/hypothesis. You may also wish to include an evaluation of any difficulties you encountered in collecting and analyzing data, together with an assessment of how this affected your plan of research.
Evaluation	Here you can provide an assessment of whether and how well you were able to answer your research question and/or confirm/reject your hypotheses.
Discussion	This chapter must relate the findings to the theoretical/policy discussion in your literature review. You should NOT introduce any new literature at this stage.
Conclusions and recommendations	An overall assessment of what you found out, how successful you were and suggestions for future research.

WRITING THE ABSTRACT

Abstracts are important because they give a first impression of the document that follows, letting readers decide whether to continue reading and showing them what to look for if they do. Though some abstracts only list the contents of the document, the most useful abstracts tell the reader more. An abstract should represent as much as possible of the quantitative and qualitative information in the document, and also reflect its reasoning. Typically, an informative abstract answers these questions in about 100-250 words:

1. Why did you do this study or project?
2. What did you do, and how?
3. What did you find?
4. What do your findings mean?

If the paper is about a new method or apparatus the last two questions might be changed to

1. What are the advantages (of the method or apparatus)?
2. How well does it work?

Here are some other points to keep in mind about abstracts:

1. An abstract will nearly always be read along with the title, so do not repeat or rephrase the title. It will likely be read without the rest of the document, however, so make it complete enough to stand on its own.
2. Your readers expect you to summarize your conclusions as well as your purpose, methods, and main findings. Emphasize the different points in proportion to the emphasis they receive in the body of the document.
3. Do not refer in the abstract to information that is not in the document.
4. Avoid using I or we, but choose active verbs instead of passive when possible (*the study tested* rather than *it was tested by the study*).
5. Avoid if possible avoid trade names, acronyms, abbreviations, or symbols. You would need to explain them, and that takes too much room.

6. Use key words from the document. (For published work, the abstract is "mined" for the words used to index the material—thus making it more likely someone will cite your article.)

WRITING THE INTRODUCTION

The introduction to your thesis should explain to the reader what you are going to investigate. It should describe the thesis's topic and scope. You should explain your reasons for investigating your chosen topic by referring to the appropriate literature. Having completed the work on the main substance of your thesis, you should have a much clearer idea of its nature and scope than you did when you wrote your preliminary abstract or proposal. The introduction to your thesis should explain to the reader what you are going to investigate. It should describe the thesis's topic and scope. You should explain your reasons for investigating your chosen topic by referring to the appropriate literature.

It is important, however, to write the introduction as though you are setting out on a process of investigation. You need to emphasize the exploratory nature of your work. You should also avoid anticipating the discoveries and conclusions that you have made in the course of your investigations. So, you might simply say that you have identified certain common features in the relevant literature, or a particular issue that it deals with, and that your thesis will examine the literature closely in order to demonstrate the relationships between treatments of the issue in the sample texts. When you have completed the main body of the work and your supervisor has commented on your complete draft, you may well wish to revisit the introduction to take into account your findings and your advisor's comments on their significance.

WRITING A LITERATURE REVIEW

Your thesis is a substantial piece of written work that ideally should conform to a number of academic conventions. One of the most important of these academic conventions is the literature review. In short, the literature review is a discussion or 'review' of secondary literature that is of general and central relevance to the particular area under investigation.

Often students ask how long a literature review should be. This is a difficult question. Obviously your supervisor may be able to give some indication of the approximate length of your literature review. However, don't become pre-occupied with word "length"; the main thing is that your literature review should capture the general and specific aspects of the literature of your subject.

WHAT IS A REVIEW OF THE LITERATURE?

A literature review is an account of what has been published on a topic by accredited scholars and researchers. Occasionally you will be asked to write one as a separate assignment (sometimes in the form of an **annotated bibliography**), but more often it is part of the introduction to an essay, research report, or thesis. In writing the literature review, your purpose is to convey to your reader what knowledge and ideas have been established on a topic, and what their strengths and weaknesses are. As a piece of writing, the literature review must be defined by a guiding concept (e.g., your research objective, the problem or issue you are discussing, or your argumentative thesis). It is not just a descriptive list of the material available, or a set of summaries

Besides enlarging your knowledge about the topic, writing a literature review lets you gain and demonstrate skills in two areas:

1. **Information seeking:** the ability to scan the literature efficiently, using manual or computerized methods, to identify a set of useful articles and books
2. **Critical appraisal:** the ability to apply principles of analysis to identify unbiased and valid studies.

A literature review must do these things:

1. be organized around and related directly to the thesis or research question you are developing
2. synthesize results into a summary of what is and is not known
3. identify areas of controversy in the literature
4. formulate questions that need further research

A literature review is a piece of **discursive prose**, not a list describing or summarizing one piece of literature after another. It's usually a bad sign to see every paragraph beginning with the name of a researcher. Instead, organize the literature review into sections that present themes or identify trends, including relevant theory. You are not trying to list all the material published, but to synthesize and evaluate it according to the guiding concept of your thesis or research question

WHY IS A LITERATURE REVIEW NECESSARY?

The literature review is an important device in your thesis as it performs a number of related functions:

1. It demonstrates to whoever reads the thesis that the author of the work has read widely and is aware of the range of debates that have taken place within the given field. It provides the proof that you have more than a good grasp of the breadth and depth of the topic of the thesis. The literature review is a great place to start, because it should demonstrate that you know what you are talking about because you have read everything that is relevant to your thesis.
2. It can provide the rationale for the research question in the study. This can be done by highlighting specific gaps in the literature – questions that have not been answered (or even asked), and areas of research that have not been conducted within your chosen field. In this way the literature review can provide a justification of your own research.
3. It can allow you to build on work that has already been conducted. For example you might adopt a similar methodological or theoretical approach in your work to one that exists within the literature, yet place your actual emphasis elsewhere. In this way you are building on work that has already been conducted by adopting similar strategies and concepts, yet focusing the question on something that interests you.
4. It helps to define the broad context of your study, placing your work within a well defined academic tradition. Poor theses often fail to relate to broader debates within the academic community. They may have a well defined research question, yet without placing this question in the appropriate context, it can lose its significance. The literature review therefore can add weight to your question by framing it within broader debates within the academic community.

ASK YOURSELF QUESTIONS LIKE THESE:

1. What is the **specific thesis, problem, or research question** that my literature review helps to define?
2. What **type** of literature review am I conducting? Am I looking at issues of theory? Methodology? Policy? Quantitative research (e.g. on the effectiveness of a new procedure)? Qualitative research (e.g., studies)?
3. What is the **scope** of my literature review? What types of publications am I using (e.g., journals, books, government documents, popular media)?

4. How good was my **information seeking**? Has my search been wide enough to ensure I've found all the relevant material? Has it been narrow enough to exclude irrelevant material? Is the number of sources I've used appropriate for the length of my paper?
5. Have I **critically analyzed** the literature I use? Do I follow through a set of concepts and questions, comparing items to each other in the ways they deal with them? Instead of just listing and summarizing items, do I assess them, discussing strengths and weaknesses?
6. Have I cited and discussed studies **contrary** to my perspective?
7. Will the reader find my literature review **relevant, appropriate, and useful**?

ASK YOURSELF QUESTIONS LIKE THESE ABOUT EACH BOOK OR ARTICLE YOU INCLUDE:

1. Has the author formulated a problem/issue?
2. Is it clearly defined? Is its significance (scope, severity, relevance) clearly established?
3. Could the problem have been approached more effectively from another perspective?
4. What is the author's research orientation (e.g., interpretive, critical science, combination)?
5. What is the author's theoretical framework (e.g., psychological, developmental, feminist)?
6. What is the relationship between the theoretical and research perspectives?
7. Has the author evaluated the literature relevant to the problem/issue? Does the author include literature taking positions she or he does not agree with?
8. In a research study, how good are the basic components of the study design (e.g., population, intervention, outcome)? How accurate and valid are the measurements? Is the analysis of the data accurate and relevant to the research question? Are the conclusions validly based upon the data and analysis?
9. In material written for a popular readership, does the author use appeals to emotion, one-sided examples, or rhetorically-charged language and tone? Is there an objective basis to the reasoning, or is the author merely "proving" what he or she already believes?
10. How does the author structure the argument? Can you "deconstruct" the flow of the argument to see whether or where it breaks down logically (e.g., in establishing cause-effect relationships)?
11. In what ways does this book or article contribute to our understanding of the problem under study, and in what ways is it useful for practice? What are the strengths and limitations?
12. How does this book or article relate to the specific thesis or question I am developing?

HOW DO I 'DO' A LITERATURE REVIEW?

Writing a literature review is not as simple as at first it may seem. What follows is a step by step guide on how to go about conducting and presenting your literature review.

1. **Generate a list of references:** The first stage of your literature review is to collect a list of literature that is relevant to your study.
2. **Make sense of your reading:** Once you have a list of references for your thesis, you now have to access and read this material. This process is going to be time consuming because you will be reading a large amount of material. Furthermore once you start your reading you might find that some of the literature is of little relevance to your study. Don't panic, this is something that many researchers and thesis students go through and is often a necessary part of the process. It is better to read something that is not central to your thesis than miss something that might be an important and relevant contribution to the field.

While reading, make notes about the central themes and arguments of the book, chapter or article. These notes can then be incorporated into the finished version of your literature review. Try and get a sense of the theoretical perspective of the author, this will be of use when you come to organize and present your literature review. Also, emphasize the way in which the piece of literature you are reading seeks to set itself

apart from other literature. Importantly, start to think critically about the piece you are reading; ask: what is this person trying to say and why? How is it different from the way others have dealt with this issue? This critical component is very important as it demonstrates that you are engaging with relevant literature in an appropriate manner and that you can discriminate between different perspectives and approaches that exist within your chosen field.

3. **Organization and presentation:** Once you have generated a large number of notes around your reading you might start to feel overwhelmed by the literature. In terms of the organization and presentation of your literature review, it is worth dividing your review into two main areas: general reading and literature that is of central importance. You will also need to further divide the literature into specific areas relevant to your study for e.g. theories and concepts; policy analysis; empirical studies and so-on. What follows are some general guidelines on how you might do this.

GENERAL TEXTS

It will be clear that some of the reading you have done is of more relevance than others. It is important, however, that you do not discard the less relevant work; instead this can form the broad background of your discussion of the more relevant literature within your field. For example you may mention different authors that have dealt with a question related to your field but may not be central to it. Highlight these in broad terms, state how these works have impacted on your particular area. You need not go into great detail about these more general works, but by highlighting these works you are demonstrating your awareness of the scope and limits of your study and how it touches upon other areas of study.

CENTRAL TEXTS

Once you have discussed the range of literature that is only of general interest to your study, you can then go into more detail on the literature that more sharply focuses on the questions that are of interest to you. Devote more detail to these particular works as they are more important to your topic. Indeed they may highlight the gap in the literature that exists that you seek to fill; they may provide the basis on which you seek to build, or they might be works which require some critique from your particular perspective.

BEGINNING WORK ON THE MAIN BODY OF THE THESIS

Once you have produced the proposal and discussed it with your supervisor, you may want to write the first draft of all chapters of the thesis. When you hand in this draft, you should arrange a meeting with your supervisor to receive your supervisor's verbal or written comments and suggestions on how it may be improved. You may, for example, produce a draft introduction setting out the issue, together with a literature review which covers what, if any, treatment of the topic has gone beforehand. You may also wish to draft those sections of the methodology chapter that cover the methods that you wish to use, together with a justification for why you think those methods are best.

REVISING SECTIONS AFTER RECEIVING THE SUPERVISOR'S COMMENTS

When you have received your supervisor's comments on the draft of any chapter, you should revise that particular chapter immediately. Prompt revision is easier than letting things drift, and you should do it while the advice of your supervisor is fresh in your mind. This will also avoid building up a backlog of work that needs to be revised,

which can be discouraging. Having the material on a computer disk will enable you to do revisions efficiently and with a minimum of fuss. Be sure to back up all your work on a CD, memory stick, or external drive.

DEADLINES FOR PRODUCING DRAFTS

You will decide with your supervisor precisely when to produce drafts, but if you are taking a thesis module over one academic year then **by the end of the first semester** you would normally expect to produce a proposal or abstract and a first draft of one or two chapters. You would then produce the drafts of the remaining chapters and complete the process of revision and writing-up during the second semester.

In the second semester, when drafting the remaining main chapters of the thesis, you will follow the practice established in the first semester of submitting the drafts to your supervisor for comments and advice. You should take advantage of the period between the first semester and the start of the second semester to write a draft of a chapter, and you should plan to have produced first drafts of all the main chapters by at least four weeks before the submission date (also allowing for any vacation periods when staff may not be available).

If, however, you are taking the thesis module over one semester, you will need to adjust this time frame accordingly.

THESIS STRUCTURE

1. Title page
2. Signature Page
3. Acknowledgements
4. Abstract—of approximately 300-400 words. (It should not exceed 700 words.). The Abstract or summary should summarize the appropriate headings, aims, scope and conclusion of the thesis.
5. Table of Contents
6. Table of Figures
7. Main Text
8. Bibliography or References
9. Appendices

The title page is followed by a letter from the candidate addressed to the Dean of the Faculty of Engineering and Applied Sciences saying 'This thesis is submitted in partial fulfillment of the requirements for the degree of Bachelor of Science' and certifying that it represents the candidate's own work.

The thesis proper consists of the Main Text (numbered 5 above). Looking closely at the Main Text, we should see something like this:

1. Chapter 1: Introduction
2. Chapter 2: Literature Review (previous work done)
3. Chapter 3: Methodology
4. Chapters 4 to n: Experimental Chapters (case studies)
5. Chapter (n + 1): General Discussion or Conclusions

Looking closely at the Experimental Chapter (numbered 4 above). In this section you specify specific case studies that you studied and performed experiments on. You mention the results and experimental procedure followed.