

STUDENT GUIDELINES

FOR

PART-TIME BENG.

FINAL YEAR PROJECT

STUDENT GUIDELINES FOR FINAL YEAR PROJECT

1. INTRODUCTION

As part of NTU's curriculum, all final year students of the School of EEE are required to undertake a project, supervised by academic staff. This project will involve an in-depth study, investigation, construction of hardware and/or development of software and testing in any of the areas of specialised courses offered in a final year option group, and comprises of a total of 10 academic units, spread over the **two** academic years. The student is required to submit a formal report, to carry out a project demonstration and also to make an oral presentation upon the completion of project.

This set of guidelines is prepared so that all students are aware of the various project requirements in terms of project schedules, project report and presentation.

1.1 Project Scope

Students are allocated 3 and 6 hours per week for each semester I and II. Arrangement will be made for students to access the respective laboratory during the curriculum time. All part-time final year projects are single-student projects.

1.2 Project Consultation / Supervision

The frequency of project consultation will depend on both supervisor and students. Students are advised to regularly consult their supervisor and keep their supervisor fully informed of their project performance and progress.

2. PROJECT ASSESSMENT

There are three components for the assessment of a project: Interim Assessment, Main Assessment and Oral Presentation. An interim assessment of the project is done at the end of the first project year by the project supervisor, when the project is half way through. The main assessment and oral presentation are done at the end of the second project year. To ensure proper moderation in the assessment, the Dean, School of EEE, will appoint a moderator for each project. Both the moderator and the supervisor for the project perform an independent evaluation of the main and oral presentation assessments.

2.1 Summary of Deliverables

A summary of deliverables from FYP students at each milestone and its assessment information is shown in Table 1. The assessment criteria for the various stages are given in Appendix A. For the actual dates of those milestones, please refer to the “Deadlines” document for the respective project year.

Table 1: Summary of deliverables

Year 2	Draft Report	Supervisor	Refer to Appendix A for guidelines.
	Final Report	Supervisor & Moderator	Students to submit one unbound copy to each of their supervisor and moderator, limiting the main body of the report to 100 pages.
	Project Demonstration	Moderator	Students to arrange with moderator for project demonstration
	Oral Presentation	Supervisor & Moderator	-
	Students to submit one hard-cover bound or ring bound copy of FYP report to the supervisor, and to submit the Submit Full Text Report (Softcopy) to the Library through Digital Repository @ NTU (Refer to Appendix C).		

2.2 Project Plan/Strategy

During the course of the project the student's progress will be closely monitored by the supervisor through meetings and/or progress reports. A short project plan/strategy report (2-3 pages) is required from the student by the due date in August/September. This may be a summary describing the main objectives of the project, the student's proposed way of carrying out the project and a proposed weekly schedule in a chart form.

2.3 Interim Assessment

It is compulsory for each student to submit a short interim report at the end of the first project year. The report will highlight the progress made by the students towards meeting the objectives laid out in his/her project plan/strategy and will be limited to a maximum of 4-5 A4 pages.

The interim assessment is carried out by the supervisor only. This assessment is based on the 2-3 page of Project plan/strategy submitted by the students towards the beginning of the project in August, its implementation and the interim report submitted. The supervisor will grade the student to gauge his/her progress and contribution at the end of the first project year.

2.4 Main Assessment

The main assessment is conducted at the end of the second project year. It has two components:

- ◆ Assessment of final project reports and project demonstration, which is done independently by both the project supervisor and the moderator for the project, and
- ◆ Assessment of the student's ability to complete the requirements of the project, through a proper project management. This includes an assessment of the logbook, draft copy of the project report and personal qualities of the students, and is assessed by the supervisor only.

2.4.1 **Project Report**

A formal, type-written final report in one-and-a-half spacing is required from every student. The main body of the report must be limited to a maximum of 100 A4 pages. If this guideline is not complied with, the students may be asked to resubmit his/her report.

A copy of the detailed guidelines on the format of the report and other requirements for the project is attached in Appendix B.

2.4.2 **Project Demonstration**

The student is expected to make arrangement for the moderator to view a demonstration of his/her project. This should be done within 14 days after the submission of the Final Report. For those projects that are research oriented or exploratory in nature, which a project demonstration may not be possible, the moderator would interview the students to gauge how well they have understood their work.

2.4.3 **Project Management**

This assessment includes components such as logbook, draft copy of the project report, user manual, if any, and personal qualities of students. The student must ensure that a good record of the work done by him/her throughout the year is maintained in a logbook. A logbook is particularly useful for continuing projects. The purpose of a draft copy of the project report is for the supervisor to suggest changes/modifications, if any, to poorly structured reports, key concepts, ideas, results, etc., indicated in the report, and also to point out any violations like plagiarism. It must be left to the student to incorporate the changes at appropriate locations in the report. The student must be asked to exercise care and responsibility in producing a good report. This will alleviate the problem of unfair grading due to different degree of help received from the supervisor. Personal qualities like ability, independence, responsibility, efficiency and effectiveness are also assessed by the supervisor as they are thought to contribute to the successful completion of the project.

2.5 **Oral Presentation**

In addition to the final report, an oral presentation by the student is also required. During the oral presentation the student will make a presentation. The supervisor and the moderator will attend and assess the presentation. The time for oral presentation will be 25 minutes for each project. The student will be given 15 minutes of presentation time and 10 minutes for the question/answer session. Questions will be directed at the student to assess his/her understanding and knowledge of the project.

2.6 **Penalty for Late Submission**

Please refer to the left menu for deadlines and note that late submissions will be penalized according to the following scheme:

Delay	Maximum Marks	Penalty
On Time	100%	0%
Less than 1 week	70%	30%
1 to 2 weeks	50%	50%
More than 2 weeks	0%	100%

Assessment Criteria

1. Interim Assessment

- 1.1 Setting of Clear Objectives and Work Plan
- 1.2 Enthusiasm and Responsibility
- 1.3 Interim Report
- 1.4 Achievement & Results
- 1.5 Clear Action Plans for Future Work

2. Report and Final Assessment

2.1 Management of Project

- 2.1.1 Draft Report
- 2.1.2 Log Book
- 2.1.3 User Manual or Equivalent Documentation
- 2.1.4 Ability and Independence
- 2.1.5 Responsibility
- 2.1.6 Efficiency and Effectiveness

2.2 Final Report

- 2.2.1 Introduction and Information Gathering
- 2.2.2 Structure and Organization
- 2.2.3 Theory, Design and Implementation
- 2.2.4 Results and Discussions
- 2.2.5 Recommendation & Conclusion
- 2.2.6 Presentation

2.3 Achievement and Project Demonstration

- 2.3.1 Project Completed According to Specifications
- 2.3.2 Contribution to Teaching/Research/Industrial Applications
- 2.3.3 Level of complexity

3. Oral Presentation Assessment

- 3.1 Contents and Organization
- 3.2 Effective Presentation
- 3.3 Accurate rebuttals to questions.

APPENDIX B

GUIDELINES TO STUDENTS FOR THE FINAL YEAR PROJECT REPORT

1. You are required to submit a stand-alone formal typewritten final report. The project work involved may contain one or more distinct phases, but the results should be combined into a final report.
2. The main body of the report (excluding charts, diagrams, appendices, tables, references, etc.) **must be limited to a maximum of 100 pages**. You may have to resubmit a condensed version of your report if you exceed this limit.
3. Your report should meet these typing and layout requirements:

<i>Page</i>	White A4 size bond paper of at least 80g /m ² . Only one side of the paper must be used for printing.
<i>Margins</i>	35mm margin on the left hand side and 30mm on the top, bottom and right hand sides of each page.
<i>Typing</i>	The same font and pitch for the whole report except when highlighting important matters.
<i>Spacing</i>	One-and-a-half spacing.

4. You should first submit one unbound copy of your final report each to your supervisor and the moderator. This will be assessed by your supervisor and moderator separately.
5. You should submit one hard-cover bound or ring bound copy of the final report to your project supervisor. This copy should be corrected with all comments, suggestions, corrections, etc. from the moderator and supervisor. In order to enable you to prepare the bound copy of the final report, it is important that you collect back the unbound copy of the report that you earlier submitted to your supervisor and moderator, immediately after the oral presentation. This should be done even if there are no corrections specified by the supervisor and moderator.

For hard-cover bound, the binding should be in dark blue with gold lettering. The use of NTU logo is recommended. To maintain consistency, **all students are advised to follow the same format for the cover page**, a sample of which is attached. Samples of the title page and table of contents are also attached.

6. The Standard International System of Units (SI) should be used.
7. The contents of the report should be in this order:

<ol style="list-style-type: none"> (a) title page (see attached) (b) table of contents (see attached) (c) abstract of not more than one page (d) acknowledgement page to give recognition of any advisory or financial assistance received in the course of the work on which the report is based (e) list of tables (if any) 	<ol style="list-style-type: none"> (f) list of figures (if any) (g) list of graphs (if any) (h) list of symbols (if any) (i) introductory chapter (j) text chapters (k) references (l) appendices (if any)
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8. Each reference, be it from a journal, textbook or conference proceedings, should be listed consistently, as in the example below.

REFERENCES

1. Breuer, M A, and Friedman, A, 1976, *Diagnosis and Reliable Design of Digital Systems*, Computer Science Press, Potomac Md.
2. Wakerly, J F, 1976, 'Microcomputer reliability improvement using triple-modular redundancy', *Proceedings of the Institute of Electrical and Electronic Engineers*, Vol. 64, No 3, March, pp 889-895.
3. Hata, M Kinoshita, K, and Hirade, K, 1981, 'Evaluation of diversity effects on mobile radio system design', *The Transactions of IECE of Japan*, Vol. 64, No 5, May, pp 31-33.
4. Comer, D J, 1990, *Digital Logic and State Machine Design*, 2nd ed. San Francisco, Saunders (HRW), section 7.1B.
5. Mano, M M, 1988, *Computer Engineering Hardware Design*. New York: Prentice-Hall, sections 5.2 and 5.3, ch. 7.
6. Tanenbaum, A S, 1990, *Structured Computer Organization*, 3rd ed. Englewood Cliffs, NJ: Prentice-Hall, section 4.2.1.
7. *PAL Device Data Book*, 1990, Advanced Micro Devices.
9. The Final Year Project Report is an important component in the assessment of the final year project. It is written for these main readers: the supervisor and the moderator for the project. The moderator is an independent party appointed by the Dean to assess the project. Very often the project report is the main instrument the moderator uses to judge the project. He/she may not be aware of the many hours the students may have spent on the project. The credit given to the students will be based mainly on their understanding of concepts and knowledge shown in their report. So a poorly or carelessly written

report, presented after months of hard work by students, may not be received well by a moderator.

In a project report, one generally looks for the following:

- a) a clear idea of the scope, objectives and background of the project.
 - b) analysis of all factors in the project, noting dependency of constraints. A clear and concise presentation of any theory required must be made.
 - c) use of references which gives evidence of the students having read about the related subject. A list of references alone is insufficient. Any work, not done by the students, but included in the report, must be duly referenced. It is to be noted that plagiarism is a serious violation.
 - d) results, discussions and suggestions for further work to assess the understanding of technical concepts and the perception of the value of the work done. Results must be appropriately presented with tables, graphs, charts, etc., wherever possible and must be linked to the objectives of the project. Interpretation and discussion of results must be put into the context of the work.
 - e) a logical organisation of the report to allow readers to grasp the contents readily. It is not always necessary that the information be organised chronologically. The students should put effort into thinking of the best way to present the information for the convenience of their readers. There must be a logical sequence of chapters, links between chapters, and sequence and links within chapters.
 - f) a good standard of written English, proper format and layout of the report.
10. For more information on project report writing, it is suggested that the students refer to the following:

Dorothy Cheung, Lai Phooi Ching, John S T Cheung, 1992, *"What Every Engineering Student Should Know About Project Report Writing,"* 2nd Edition, Longman Singapore.

SAMPLE COVER PAGE, TITLE PAGE AND TABLE OF CONTENTS

COMPUTERIZED VHF/UHF PREDICTION MODEL FOR SINGAPORE 2007 P2099

COMPUTERIZED VHF/UHF PREDICTION
MODEL FOR SINGAPORE



NG GIM MING

SAMPLE

SCHOOL OF ELECTRICAL AND ELECTRONIC ENGINEERING
NANYANG TECHNOLOGICAL UNIVERSITY

2008

Project Number

COMPUTERIZED VHF/UHF PREDICTION
MODEL FOR SINGAPORE

SUBMITTED

BY

NG GIM MING

2006-08 P2099

SCHOOL OF ELECTRICAL AND ELECTRONIC ENGINEERING

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