



UNIVERSITY
OF WOLLONGONG
AUSTRALIA

Preparation & Submission of Postgraduate Coursework Advanced Project

MMMB940 – Advanced Project

Students & Supervisors Guideline 2022

Please read this guideline in conjunction with the Subject Outline for this subject

School of Mechanical, Materials, Mechatronics & Biomedical
Engineering

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1 Subject Overview

MMMB940 advanced project provides students with the opportunity to undertake a high-level project under the close supervision of a member of academic staff. Students complete a project in their area of interest. The project develops skills in information retrieval, project planning and organisation, analysis, problem-solving and effective communication of results. Involves the undertaking of an individually supervised project focused on solving a problem relevant to the discipline area of the degree. The student would normally be required to do a literature survey, analysis, and develop suitable solutions to the selected problem.

This will allow the students to apply the knowledge and skills acquired in the structured coursework and thus gain valuable confidence in their ability to practice engineering at a high professional standard.

Throughout this subject, students will be provided with support through lectures, writing and research workshops and direct contact with their supervisors.

Students will be contacted throughout the Session via UOW SOLS Mail and Moodle announcements with important information relating to this subject.

2 Project Topic Allocation

Once enrolled, students can find a topic by himself by contacting school academics or will be allocated a topic by the subject coordinator during week 1. Topics will be allocated on the basis of supervisor availability and the students' major. Changing topics or supervisors from those allocated is not normally allowed but may be possible by agreement from the supervisor and subject coordinator.

Students may be allocated an individual topic, or a topic that is shared with other students under the same supervisor. In each case, individual work and assignment submissions are expected.

3 Project Workshops

In addition to the workshops, the Engineering and Information Sciences Faculty Librarian will be pleased to hold individual sessions with research project students. To arrange an appointment contact the librarian directly (Refer Part B of the subject outline) or see the Subject Coordinator. This is an essential step towards a successful project and so highly recommended.

4 Guidance from the Academic Supervisor

The academic supervisor will support and mentor the student in developing an understanding of the theoretical background information and application of theory to aid the student's completion of the project. Specifically, the academic supervisor will:

- Ensure that the overall work requirements are commensurate with an MMMB940 12 credit point subject.
- Maintain regular contact with students in order to monitor their progress. It is recommended that the supervisor meets with the student at least once every two weeks.
- Provide timely and helpful written feedback to students on any submissions and support them to develop solutions as problems are identified.
- Advise students of inadequate progress or work below the standard generally required and suggest appropriate action.
- Submit marks from all assessment tasks to the Subject Coordinator within 14 calendar days of the assessment submission date.
- Inform students and the Subject Coordinator about any planned absences during the candidature and arrangements for supervision during those absences. This is particularly important in the final weeks of either session when assessment marks and student feedback are due. Refer to the subject outline.

All project costs incurred, associated with the submission of the stated minimum requirements, must be borne by the student.

5 Project Support

Students have Inter-Library Loan privileges in the Library and should make use of these privileges to gather information for their literature search (a maximum of five interlibrary loans may be requested). Project students will be granted access to workshop and laboratory facilities as required for the project topic. Please note that not all topics will involve utilisation of workshop or laboratory facilities. Any access to these facilities will be contingent on the availability of supervisory staff, space, and compliance with health and safety regulations.

Students needing assistance with English grammar and written communication should consult with the Learning Development Centre (Building 11, Level 3, take lift opposite the Unishop) as soon as possible for assistance. Problems with grammar and spelling often delay progress in the project and will not be acceptable reasons for a late submission. Your supervisor might be able to put you in touch with a professional proofreader but costs must be borne by the student.

Resources are available from the UOW Library home page: www.library.uow.edu.au

To access databases you require your student card and your email username and password.

View Engineering subject-specific resources from <http://uow.libguides.com/engineering>

This page has been designed for student, staff and research groups. Please read the Services that are available to you and use the Online Tutorial to assist you with using Library resources.

Other sites that will be of assistance to you are:

- Referencing and Citing guide – examples of how to reference your material <https://www.uow.edu.au/student/learning-co-op/referencing-and-citing/>
- Evaluating the quality of online information – <https://www.uow.edu.au/student/learning-co-op/finding-and-using-information/evaluating-the-quality-of-online-information/>
- Types of Assessments - <https://www.uow.edu.au/student/learning-co-op/assessments/>
- Effective Searching PDF: A good reminder of some tips for planning an effective search
- Referencing Guide: UOW's Referencing & Citing Guide
- Engineering Guide: Provides students with the recommended databases for Engineering research
- IEEE Xplore Tutorial: An interactive tutorial on using IEEE Xplore
- Scopus (Basic) Tutorial: An interactive tutorial on using the Scopus database (e.g. searching, editing your search, and how to find full text)
- Scopus (Advanced) Tutorial: An interactive tutorial on using the advanced features of the Scopus database (e.g. searching, refining, identifying top journals)

6 Assessments

6.1 Assessment 1 Project proposal (5% of total mark)

The project proposal package should include the following items:

- Proposed title
- Aims and objectives
- Scope
- Proposed work plan and methodology
- Project log and laboratory book preparation (if required by the student's supervisor)
- Risk assessment/WHS form (when required, the supervisor will advise)
- Induction to the local area e.g., laboratory, workshop etc as required (supervisor will advise)
- Other documents such as Safe Work Procedures (SWP) may be required depending on the project
- Bookings or certification for training as required on all equipment and procedures of medium or above risk

6.2 Assessment 2 Progress report (20% of total mark)

The progress report provides the opportunity for you to get detailed feedback from your academic supervisor. The progress report should be presented as the early chapters of your final document (see 2.5), in an academic style. The progress report should contain the following:

- Clear problem definition
- Refined aims, objectives and scope
- Review of relevant literature
- Detailed description of the method being used
- Results obtained to date
- Updated work plan

This assessment is a critical milestone in the project. As this is a progress report, extensions to the deadline will not normally be granted. Should a progress report indicate that insufficient progress has been made, the supervisor will meet with the student to discuss what must be done to ensure successful completion of the project. Please note that late start to the project will not necessarily be considered a reasonable justification for insufficient progress.

6.3 Assessment 3 Oral Presentation (10% of total mark)

Presentations will normally be scheduled in week 9 or 10 of the second semester. At least two academic staff will assess the oral presentation. Both assessors will carry equal weight. The purpose of this assessment is to seek feedback from other academic staff and your peers. The presentation is 10 mins duration plus 2 minutes question time and should include key details of your project and explain your findings so far. This includes:

- An overview of your project, including aims and objectives
- Key literature and data that form the basis of your project
- Your method
- Results and analysis to date
- Challenges/delays encountered so far and your strategies for overcoming these

- Anticipated risks to project completion and risk mitigation strategies
- Powerpoint slides of the presentation submitted to Moodle
- Two or more academic staff of the specific Discipline will assess your seminar. Project candidates are expected to attend the presentation in which they are presenting.
- Visual aids such as PC PowerPoint and PC projector and overhead projectors will be available in the allocated presentation room. However, it is the responsibility of students to ensure that PC/audio/visual equipment they require is available and functioning satisfactorily. If problems are encountered, please discuss this with the Project Subject Coordinator.

6.4 Assessment 4 Participation (5% of total mark)

The students are expected to arrange regular meetings with their supervisors and are responsible for keeping the record of the meetings. The supervisor will provide a mark, at the end of term 2, based on his/her impression of students' effort and students' meeting records. Although each academic has his/her own way of carrying out research meeting, a common suggestion for the students is to provide the following information (through email) before each meeting:

- Overall scope and milestones for the project
- Progress from the last meeting
- Issues and assistance required from the supervisor
- Plan for the next period (a week or two weeks)

6.5 Assessment 5 Final Report (60% of total mark)

12 cp research project must be marked by the principal supervisor and one independent marker (not supervisor). The draft final report is due on Friday Week 10 of Semester 2 and is to be sent to your supervisor directly (through email or other media). For the draft Final Report, your supervisor will only be able to advise you on what you have submitted. Partially completed versions increase your risk of failure of the subject.

Students should undertake all corrections specified by the supervisor in the draft report. The final report is due on Friday Week 13 of Session 2 and is to be submitted online via Moodle. At least two academic staff will assess the final report. Both assessors will carry equal weight. If the marks differ by more than 10%, a third assessor will be consulted.

Detailed instructions for preparation of the final report will be covered in Academic writing workshops in addition to instruction provided by the supervisor. A recommended layout of the report is as follows:

- Title page
- Acknowledgements
- Abstract (not more than 250 words)
- Table of contents
- List of Figures/Plates
- List of Tables
- Notation (and units)
- Main body of research report
- References
- Appendices

For further details on the title page, acknowledgements, abstract, table of contents and notations, refer to Appendix.

7 Main Body of Report

The main body of the final report must be divided into a number of chapters. Each chapter should contain a number of sections and each section may contain a number of sub-sections. The use of sub-sub-sections should be avoided. The numbering system used herein may be adopted for ease of cross-references.

For further details on the title page, acknowledgements, abstract, table of contents and notations, refer to Appendix A.

7.1 General Report Structure

The structure of your final report should be the subject of discussion with your individual supervisor and will depend on the project you are undertaking for your report.

The following is provided as a typical example of a structure for a report. It must not be taken as a requirement or accepted as the structure for your final report specifically.

Note that the headings here must be made specific to the problem. Note also that each section leads on from the last. Each section should begin with a statement of where the process of solving the problem (or completing the research) is up to and what this section will do towards solving the problem. Each section should close with a statement about what was achieved by this section and what the next step in the solution of the problem now is. In this way, both you and the reader are informed of why that section exists and what has been achieved so far.

7.2 Typical or recommended report structure:

7.2.1 Abstract

A typical report starts with an Abstract (Abstract starts on Page i. Therefore, use Roman numerals up until the Introduction). A one-page Abstract that must not refer to the report itself and should be able to be read as a standalone document, informing the reader of what was set to achieve, what was done to try to achieve it, and what the results were.

Acknowledgements

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List of Figures

List of Tables

Nomenclature

7.2.2 Chapter 1. Introduction

The Introduction is the first section of the main body of the report (note Introduction starts on Page 1). This section identifies the problem that is the subject of your report, the reasons why it is important to solve this problem, and the methodology that you are going to use to solve it. i.e. the steps in the analysis from this point to a conclusion. You would normally also include some background information.

There must be a purpose for the report, and this should be specified as early as possible to inform the reader in particular, if not you about what this work is focused on. Your project proposal would normally be of major use in developing the introduction.

7.2.3 Chapter 2. Research into existing knowledge

This may have any number of titles and is sometimes called the literature review, but literature may not be the only source of information. This chapter is a result of an active search for existing knowledge that can be used in better defining or in solving the problem established in the Introduction (Chapter 1.0). It provides a basis for the next step in the project and should be completed with a statement as to what needs to be done in the report given the knowledge that already exists and its applicability to the problem you are addressing. Note that the only value you add is the critical review of this existing knowledge in the context of the problem you have to solve. Quoting, paraphrasing or otherwise describing the views of others is of little or no value towards the report and will only detract from the report. Your job is not to educate the reader. It is assumed that, if interested, the reader can get the details of this information directly.

7.2.4 Chapter 3. Design of the experiment or test

Given what has been learnt in Chapter 2, what is the detail of how you are going to undertake the study or analysis. Generally, you will need to develop some hypothesis about what you might expect to find and then a testing method that you would use to determine if there is evidence that this hypothesis is true or applies in this case. A specific example of this might be that you have to test whether quality standards are of benefit to organisations. In that case, under 2.0 you will have determined what others have claimed and have identified what you believe would be the benefits (your hypothesis). The next step is to work out how you would measure these benefits if they existed (your experiment or test).

7.2.5 Chapter 4. Undertaking of experiment or test

In the final report, this is a report of the actual undertaking of the experiment or test. It may start with a description of the subject. This would be the organisation reviewed, for example.

7.2.6 Chapter 5: Evaluation of the results (discussion)

This is then a reflection on the hypothesis, the test procedure and the results reported in 4.0 (not sure what this refers to?).

7.2.7 Chapter 6: Conclusion

Identifies the outcomes of the project. This simply reports on findings already described earlier. It should reflect what has been stated in the introduction about what is attempting to be achieved in the report. Note that you may or may not have achieved these things. The reasons for achievement or not can also be stated.

7.2.8 References

Refer to University guidelines and your supervisor for the required format. Make sure that these are also cited where they are used in the body of the report. All material used in the report MUST be referenced properly. There is a guide to referencing on the Library website that might be useful

7.2.9 Bibliography

List of readings of relevance to the topic but not specifically used in the report itself. The bibliography is of very limited usefulness and will not suffice as a substitute for proper referencing (Do not call a Bibliography list References!)

7.2.10 Appendices

Material, which, if included in the main text, would disrupt the flow of the presentation, should be included in the appendices. These include mathematical and numerical details, maps, charts, computer programme listings, work plan and risk assessment. However, significant numerical material (e.g. data files, computer output, and the like) should only be presented on the CDs.

Drawings, tables and photographs shall be inserted wherever necessary to enhance the readability of the report and should be included in the text as close as possible to the first citation. Each drawing, table and photograph must be provided with a caption or title. Should a table or figure be arranged in landscape mode the page should read away from the report spine.

8 Referencing information sources

All information from sources other than your own work must be referenced using a brief, in-text citation and a full reference list. One of two methods of in-text citation must be used to reference other people's work. The two acceptable methods are: -

- Author date – By naming the author followed by the year of publication (author, date). The reference list should be organised alphabetically by author.
- Numbered – By including a number in brackets corresponding to the full author details in the reference list.

For report that use many references, the first method is usually most convenient. Otherwise, the second method is quite acceptable. For the first method, the listing of references should be in alphabetical order of the names of the authors; for each author, the listing should be in the order of publication dates. For the second method, the references should be numbered in the order in which they are first referred to in the text.

Examples of the methods of referencing and the corresponding styles of listing may be seen in Appendix B.

9 Grammar and English Usage

Particular attention should be paid to spelling, usage of English, and proof-reading of the typed manuscript. The body of the manuscript must be written in the third person past tense and formal style. Test procedure description/s may be written in an alternate person and tense. Students experiencing difficulty should consult with the Learning Development Centre for assistance or seek assistance during academic writing workshops. If you are experiencing any difficulty with this, you must seek advice.

Extensive spelling and English corrections will not normally be undertaken by the supervisor/s. Students will be required to add the Disclaimer Statement if the supervisor gives the assistance.

"The majority of work in this report is original. However, some assistance with spelling and English has been provided by my supervisor/s."

If deemed necessary by the project supervisor and project subject coordinator, this Disclaimer must appear towards the bottom of the report Abstract page.

10 Word Processing

The draft final report shall be presented in a permanent and legible form. Accordingly, only the original or good quality photocopy is acceptable. The only bond paper shall be used in all copies.

The specifications given below shall be followed:

- the text of the report shall be in Times Roman 12 font;
- line spacing set at 1.5 lines;
- the size of the paper shall approximate ISO paper size A4 (297mm x 210mm), except for illustrative materials such as drawings, maps and printouts, on which no restriction is placed;
- the margins on each sheet shall be not less than 25 mm on the bound side and 20 mm on the opposite side, 20 mm at the top and 20 mm at the bottom;
- There shall be a *title page* showing report title, *author's name*, *degree* and *date of submission* (see Appendix C). No other decoration should be included on this page.
- All pages (including diagrams, tables and appendices) shall be numbered consecutively.
- Headers and footers should contain the page number only and be void of borders. References should not be placed as footnotes.
- Diagrams and tables etc. with proper captions shall appear on pages close to where reference is first made to them. Photographs should be included as 'jpg' or 'gif' objects in the word document. Figure and photograph titles should be placed following the Figure whereas Table titles should be placed at the top of the table.

11 Appeals

Students who consider they have received adverse assessment may initiate an appeal. At the initial level, this should be discussed with your supervisor(s). Subsequent action, supported by written documentation, may be taken up with the Subject Coordinator. Any appeal initiated after marks have been declared must be formal and lodged in accord with the University Rules and Regulations. Please view the grievance process on the Faculty of Engineering and Information Sciences website and observe correct procedures.

12 Rate of Progress

If for some reason a student makes insufficient progress in the course of the report it is important for he or she to be aware of the effect on their overall degree. Since the project subject is an annual subject it is possible for a student to withdraw up until the date set in the second session for withdrawal without penalty (currently Week 8).

All students find research project report a difficult challenge and very stressful. The vast majority of students complete their final report without unsurmountable difficulty. However, if you are having difficulties at any point in your report for whatever reason, do not hesitate to contact the Subject Coordinator. If you need to know how to manage work-related stress, see Appendix G.

13 Safety in Laboratories and Field Work

Where laboratory or field work is required, it is imperative that students' work safely in the laboratories/field at all times. In particular, substantial footwear must be worn. e.g. thongs and sandals are not acceptable. All correct safety wear must be used at all times and students must be authorised in writing to use any equipment.

A "Risk Assessment Form" relating to your project is to be completed and submitted before any work commences. This is to identify safety issues relating to your proposed work programme and come to an agreed means of addressing these issues (in discussion with the technical staff responsible for the relevant laboratory area and your supervisor). Your supervisor is to initial this sheet to ensure that he/she is aware of the major safety considerations and the agreed actions to be taken. If there are significant departures from the original programme of work this sheet may need to be updated and a new form submitted.

At the commencement of their project, students should introduce themselves to the technical or professional officer responsible for any laboratory in which they will be working. You must make sure they are aware of your presence and what you are doing at all times.

If students wish to work in the laboratories outside the hours when technical staff are available, then the following Faculty WORKPLACE SAFETY REGULATIONS must be followed at all times.

- Staff and students must not work alone in:
 - Laboratories where chemical substances are handled or housed or where there is a risk of injury from the work being carried out.
 - In areas where power tools or hand tools that could cause injury are used.
 - Areas where moving machinery is used.
- In all areas other than those detailed above where staff or students work alone, arrangements should be made for other staff to regularly check the welfare of persons working alone. Alternatively, a means of communication to gain assistance must be available.

The above regulations were resolved by the University of Wollongong Occupational Health and Safety Committee.

You must obtain written permission from your supervisor and the relevant lab manager before undertaking any work in any laboratory. All safety rules must be observed at all times.

Letters giving permission to work in laboratories after hours or at weekends may be arranged through your Supervisor (you must be accompanied by another adult at all times). Keys are not issued and students must arrange with your Supervisor or Supervisors delegates to be available to provide access out of hours.

14 APPENDIX A

TYPICAL FINAL REPORT CONTENT

Examples of:

- A.1 Title Page
- A.2 Abstract Page
- A.3 Table of Contents
- A.4 Notation
- A.5 Presentation of Chapters

Are shown on the following five pages.

14.1 **Title Page**

REPORT TITLE

By

STUDENT NAME

A report submitted in partial fulfilment of the
requirements for the award of the degree of

MASTER OF ENGINEERING PRACTICE
(Discipline)

Or

MASTER OF ENGINEERING

SUPERVISOR NAME

from

UNIVERSITY OF WOLLONGONG

FACULTY OF ENGINEERING AND INFORMATION SCIENCES

Month (June or November) 20XX

14.2 Abstract Page

ABSTRACT

(250 words maximum)

(One page only)

14.3 Table of Contents

TABLE OF CONTENTS (Example only)

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14.4 Notation

a	length of strip or beam, mm
[A]	transformation matrix for skew strips (Eqn. 5.28)
A,B,C	undetermined coefficients (see Eqn. 2.12)
B	used as suffix for bending analysis
[Bb]	matrix of coefficients relating curvatures to displacement amplitudes
[Bp]	matrix of coefficients relating strains to displacement amplitudes
[C]	coefficient matrix for the displacement function
[D]	plate rigidity matrix
E	modulus of elasticity, MPa
f	individual coefficient of flexibility matrix
[f]	flexibility matrix
[F]	modified flexibility matrix
H,V,T	horizontal, vertical and rotational restraints (redundant reactions)
k	individual coefficient of a stiffness matrix
[K]	stiffness matrix
m	the general harmonic term
M	bending moment, kNm
M _x	transverse bending moment (relative to transverse x-axis), kNm
M _y	longitudinal bending moment (relative to longitudinal y-axis), kNm
M _{xy}	twisting moment, kNm
p	used as suffix for in-plane analysis
p	load, kN

Note Units must be presented for all variables

14.5 Chapter Presentation

CHAPTER 1

DEVELOPMENT OF ROCK DISPLACEMENT INSTRUMENTATION SYSTEM 1 MAGNETIC ROD EXTENSOMETER

1.1 INTRODUCTION

An attempt has been made to develop a new type of rock displacement extensometer. Particular interest has been paid to rock displacement along the axis of a horizontal borehole drilled into the sides of mine roadways. Such an instrument, however, may be used for measurement of the displacement of a borehole along its axis in any direction.

The principle of the technique consists of installing magnetic reference points made of small rectangular or circular magnets at predetermined intervals along the axis of a borehole. The reference points are then located by a magnetically-susceptible medium, mounted on a length of the straight non-magnetic rod.

The procedure consists of inserting the magnetically-susceptible rod in the borehole containing the magnetic reference points. Upon short direct exposure of the sensing medium to the magnetic field of the magnets, the regional magnetisation will be introduced on those portions of the sensing medium directly facing the reference magnets. The rods are then removed to the laboratory where the magnetisation zones are traced out by suitable detectors, and the relative distances between the reference points may be measured.

1.2 BACKGROUND

This problem has existed for a long time.....

15 APPENDIX B

METHOD OF REFERENCING AND REFERENCE LISTING

B.1 Reference by Naming Authors

The following is an extract from a published work, which may serve as an example when the author's name is placed in the sentence:

"The flexibility approach adopted by Mortarjemi and Van Horn (1969) is useful only in determining the load-distribution characteristics for some specific form of box-bridge construction. Other methods of analysis due to Wright et al. (1968, 1968a), Richmond (1969, 1969a, 1971) and Kristek (1970) are approximate in assumptions and in applications and are generally suitable for single-cell boxes only.

Space-frame programs have also been used, e.g. by Smyth and Srinivasan (1973), in the analysis of a box-girder bridge deck. However, the simulation of boxes by space frames is not capable of predicting local effects and the method has proved expensive in use".

If the sentence does not use the author's name but the content requires referencing the following method should be used:

At Idaho Falls, a 1.6m thick soil layer was capable of storing and removing 370 mm of precipitation which corresponds to the maximum annual precipitation over a 40 yr. period (Anderson et al. 1993).

The corresponding reference listing should follow the styles below:

(a) Articles

Author's name (surname first followed by initials (title case)); year of publication in brackets; full stop; the title of the article; full stop; the title of the journal (abbreviated in the conventional manner as desired); comma; volume; comma; part of a number; comma; the month of publication (if applicable); comma; numbers of first and last pages; full stop.

b) Books and Reports

Authors' names in title case (surname first followed by initials); year of publication in brackets; full stop; the title of the book; full stop; series number (if applicable); comma; publisher/s; comma; place of publication (if necessary); full stop.

Examples of the two styles of listing may be found in D.2 and D.3 respectively

B.2 Portion of Typical Reference List

Gere, J.M. and Weaver, W.J.R (1965). Analysis of framed structures, Van Nostrand.

Goldberg, J.E. and Leve, H.L. (1975). Theory of prismatic folded plate structures. IABSE Publications, Vol. 17, No. 5, pp. 59-86.

Guyon, Y. (1946). Calcul des ponts larges a poutres multiples solidarisees par les entretoises. Annales des Ponts et chaussees, 24, pp. 683-718.

Hamada, M. (1966). Statical deflection of parallelogram plate with clamped edges subjected to uniform pressure. Trans. Japan Soc Aero Space Sci., 9 November, p. 84.

Hellen, T.K. and Protheroe, S.J. (1974). The BERSAFE finite element system. Computer-Aided Design, Vol. 6, No. 1, pp. 15-24.

Iyengar, K.T.S. and Srinivasan, R.S. (1967). Clamped skew plates under uniformly distributed load. Jnl. Royal Aero. Soc., 71, February, pp. 139-140.

Johnston, S.B. and Mattock, A.H. (1967). Lateral distribution of load in composite box girder bridges. Highway Research Board Washington, D.C.

Kabi, A.F. and Scordelis, A.C. (1974). Computer program for curved bridges on flexible beams. SESM Report No. 74-10, University of California, Berkeley, September.

Kristek, V. (1970). Box girders of deformable cross-section - some theory of elasticity solutions. Proc. ICE, Vol. 47, October, pp 239-253.

B.3 Reference by Numbers

This method of referencing is widely used in writing journal articles. The following is an example:

"Cable structures are becoming increasingly popular because of their economical constructional advantage and high strength capacity. However, the cable material typically used in modern construction exhibits linear stress-strain characteristics over only a portion of its useable strength. For ultimate load analysis, the resulting formulations should consider material nonlinearity. Some attention has been given to nonlinear material effects in static cases (1-3, 5-7, 13), but little attention has been devoted to dynamic cases (8, 9, 11, 12)."

It should be noted that the authors may also be names in this system as can be seen in the following paragraph.

"With the advances being made in digital computer capabilities, simulations of discrete digital time sequences have become an important engineering tool for both design and analysis. Digital time sequence simulations of random waves for ocean engineering applications have been developed by Smith (1) and applied by the Jones (5) for random wave force predictions. Alternative techniques for simulating a discrete random time sequence have been developed by Shvetsov and Shorin (10) and by Shinozuka (8) with an application to coastal sediment transport problems under random waves by Wang and Liang (13). In addition, dynamic testing systems, which are utilized to compute complex-valued transfer functions by the Frequency-sweep method, may be driven by a digital simulation of a discrete random time sequence that has been synthesized from a Fast Fourier transform (FFT) algorithm and is capable of providing excitations of the more desirable periodic random type (see for comparison, Ref. 6)."

For this method the styles of listing are very similar to those given in D.1 except that:

- (i) the authors' names only need to be in upper and lower case;
- (ii) for articles, year of publication should be inserted just after the month of publication;
- (iii) for books and reports, the year of publication should appear last;
- (iv) title of the article (in upper and lower case) should be in double quotations and starts and ends with a comma;
- (v) title of journal or book should be underlined.

The following are two examples:

1. Wehausen, J.V. and Laaitone, E.V., "Surface Waves," Encyclopedia of Physics, Vol. 9, 1960, pp. 475-479.
2. Gere, J.M. and Waver, W.J.R., Analysis of Framed Structures, Van Nostrand, New York, 1965.

B.4 Electronic Material

Electronic Material Students are advised to refer to the requirements of referencing electronic sourced material. Useful information on citing online sources is available on the Referencing and Citing guide <http://uow.libguides.com/refcite/getting-started>

This information is available in the Referencing: Getting started guide under each referencing style.

Additional material is available from the Learning Development Centre (19:G102).

16 APPENDIX C

STRESS

As you no doubt realise, the final report is a major task to undertake - by far the biggest single piece of assessable work you will tackle in the course of your degree. It is also quite different in kind from the work involved in the other subjects.

In the other subjects, with the setting of tutorials, continuous assessment tasks and so on, students are led step by step through the required material. In contrast, when it comes to the project, the student is primarily responsible for the progress of the project - setting of goals, timetables and monitoring rate of achievement of these tasks. A very significant part of the project is the effective "project management" aspects associated with meeting the various deadlines set out in the previous section. A particular challenge in this subject is to maintain progress whilst still meeting the assessment requirements of the remaining subjects.

Consequently, in grappling with this project it is not surprising that most, if not all, students will feel some degree of stress at some stage during the project. This is true to some extent with any assessable task but given the magnitude of this task may reach higher levels - and in some cases may impede the successful completion of the project.

There are several points that may assist with regard to the handling, and hopefully relieving of this stress:

- Stress, to some degree, is a common part of the effort involved in tackling a major and significant task of this sort. You will not be the odd one out if you are experiencing this.
- If you are a "bright" student with a good academic record you are not immune – you are likely to have set your personal standard for the final report at a challenging level - and you need to be careful that it is not too challenging (regular interaction with your supervisor should help).
- Stress-free project completion is invariably associated with good project management and disciplined time management - including the ability to prevent project work from being swamped by the requirements of your other subjects.
- The student is basically the "project manager" for the research project - not the supervisor - and is responsible for seeing that the project gets done. However, you should draw on your supervisor's experience and guidance regularly throughout the project. Regular meetings with your supervisor (weekly or fortnightly) are perhaps the best way to ensure this. The best way of relieving stress in the project is to catch the causes early and solve them. A problem shared is a problem halved - therefore make it part of your project management plan to organise regular meetings with your supervisor.
- If there are problems that you do not appear to be able to resolve in conjunction with your supervisor, you should discuss them with the coordinator of the subject.
- The University has a counselling service, located in the UniCentre building, to assist students. A significant part of their work involves assisting students in coping with the stress associated with tackling this type of major project. Be aware of and make use of this resource sooner rather than later if you feel stress levels building. There are techniques and strategies you can use to help you not only in this task but also in your future career.

17 APPENDIX D.1 Project Proposal Marking Criteria

Assessment Component	High Distinction (85-100)	Distinction (75-84)	Credit (65-74)	Pass (50-64)	Fail (0-49)	Mark for Item
A. Aims, objectives, and scope	<ul style="list-style-type: none"> Aims, objectives, and scope indicate an excellent comprehension of the research topic Clear, concise and consistent set of aims Clear and concise objectives that are a logical follow on from proposed aims Intended scope of work is aspirational, but achievable within the timeframe 	<ul style="list-style-type: none"> Aims, objectives, and scope indicate a good comprehension of the research topic Clear and concise set of aims Clear and concise objectives Intended scope of work is realistic and achievable within the timeframe 	<ul style="list-style-type: none"> Aims, objectives, and scope indicate a developing comprehension of the research topic Clear and concise set of aims, may require minor reworking Objectives are clear, but may be inconsistent with aims Intended scope of work requires refinement 	<ul style="list-style-type: none"> Aims, objectives, and scope indicate a developing comprehension of the research topic Aims are generally ok, but require refinement and rewording Objectives require some reworking to align with aims Intended scope of work is unrealistic 	<ul style="list-style-type: none"> Aims, objectives, and scope indicate little comprehension of the research topic. May suggest little or no preliminary reading around the topic Aims require complete revision Objectives require complete revision Intended scope of work is unrealistic 	Mark for A
Select mark for A →	17-20	15-16	13-14	10-12	0-9	/20
B. Proposed work plan and methodology	<ul style="list-style-type: none"> Clear initial plan of work for completing the project. Detailed gantt chart or similar project management documentation Evidence of extensive reading around similar research Sound understanding of one or more appropriate methodologies 	<ul style="list-style-type: none"> Clear initial plan of work for completing the project. Detailed gantt chart or similar project management documentation Evidence of reading around similar research Good understanding of one or more appropriate methodologies 	<ul style="list-style-type: none"> Initial plan of work for completing the project requires refinement but shows good progress. Draft gantt chart or similar project management documentation Evidence of reading around similar research Developing understanding of an appropriate methodology 	<ul style="list-style-type: none"> Initial plan of work for completing the project requires significant revision Gantt chart or similar project management documentation under development Some evidence of reading around similar research 	<ul style="list-style-type: none"> Initial plan of work for completing the project shows limited comprehension of what is required Substantial supervisor guidance required to help student develop their research direction 	Mark for B
Select mark for B →	51-60	45-50	39-44	30-38	0-29	/60
C. Additional Materials and preparation work	<ul style="list-style-type: none"> All expected materials and prep work completed as required by the supervisor (safety inductions, training bookings, information requests, draft HREC applications, draft risk assessments, etc) 	<ul style="list-style-type: none"> Most expected materials completed as required by the supervisor (safety inductions, training bookings, information requests, draft HREC applications, draft risk assessments, etc) 	<ul style="list-style-type: none"> Most expected materials required by the supervisor are in progress (safety inductions, training bookings, information requests, draft HREC applications, draft risk assessments, etc) 	<ul style="list-style-type: none"> Most expected materials required by the supervisor are acknowledged in the work plan but some are yet to be commenced (safety inductions, training bookings, information requests, draft HREC applications, draft risk assessments, etc) 	<ul style="list-style-type: none"> Some expected materials and prep work may be noted in the document, but no progress has been made. 	Mark for C
Select mark for C →	17-20	15-16	13-14	10-12	0-9	/20
					TOTAL	/100

18 APPENDIX D.2 Progress Report Marking Criteria

Assessment Component		High Distinction (85-100)	Distinction (75-84)	Credit (65-74)	Pass (50-64)	Fail (0-49)	Mark for Item
Problem Definition /30	A. Scope of project and Approach	<ul style="list-style-type: none"> Excellent, clear definition of a substantial and significant research topic, problem and/or hypothesis (including statement of purpose and relevance) and scope (including context, boundaries and assumptions). The abstract accurately yet concisely captures the research topic, methods and outcomes to date. A clear set out plan with goals and methods systematically and logically follows from the background research. The approach demonstrates a high level of creativity and innovation and includes an evaluation of alternative approaches. 	<ul style="list-style-type: none"> Very good definition of substantial research topic, problem and/or hypothesis (including statement of purpose and relevance) and scope (including context, boundaries and assumptions). The abstract accurately captures the research topic, methods and outcomes to date. A clearly set out plan with goals and methods systematically follows from the background research. The approach shows creativity and innovation and includes an evaluation of alternative approaches. 	<ul style="list-style-type: none"> Good definition of an adequate research topic, problem and/or hypothesis (including statement of purpose) and scope (including assumptions). The abstract captures the research topic and outcomes to date. A plan of work follows from the background research. The approach is systematic and includes consideration of alternative approaches. 	<ul style="list-style-type: none"> Satisfactory definition of sufficient research topic, problem and/or hypothesis and scope. The abstract satisfactorily captures the research topic and outcomes to date. A satisfactory plan of work is offered. The approach is systematic, but shows limited consideration of alternative approaches. 	<ul style="list-style-type: none"> Poor or incomplete definition of research topic and scope. The abstract is not clear about the research topic and its outcomes to date. The plan of work offered is incomplete or unclear. The approach is not well considered, and does not logically flow the background research presented. 	
	Select mark for A →	26-30	23-25	20-22	15-19	0-14	/30
Technical Content /50	B. Literature review	<ul style="list-style-type: none"> Extensive, relevant and logically organized review, analysis, discussion of background material, both specific research and general theory, helps the reader understand the rest of the document, and demonstrates clear mastery of the material in the topic area and ability to synthesize and abstract knowledge. Demonstrates understanding of the impact of recent developments in the field. 	<ul style="list-style-type: none"> Relevant and logically organized review, analysis, discussion of background material, both specific research and general theory, helps the reader understand the rest of document, and demonstrates mastery of the material in the topic area and ability to synthesize and abstract knowledge. 	<ul style="list-style-type: none"> Good review / discussion of background material, with both specific research and general theory, and shows sound understanding of the material in the topic area and ability to synthesize and abstract knowledge. 	<ul style="list-style-type: none"> Acceptable coverage of background material, with both specific research and general theory, and shows developing understanding of the material in the topic area. 	<ul style="list-style-type: none"> A limited coverage of background material, which perhaps flaws in the basic understanding of the material in the topic area are evident. 	
	Select mark for B →	26-30	23-25	20-22	15-19	0-14	/30
	C. Results to date	<ul style="list-style-type: none"> Data collection is at an advanced stage. Preliminary analysis demonstrates excellent understanding of all elements of the research and a high level of independent thought. Limitations and possible sources of error in data collected have been considered. Critical analysis of results to date show deep insight knowledge on the topic. Challenges encountered have been overcome with creativity and a high degree of autonomy. 	<ul style="list-style-type: none"> Data collection is underway. Analysis has commenced and demonstrates very good understanding of most elements of the research and independent thought. Information obtained is interpreted correctly, patterns and trends are emerging and sources of error or limitations of the data are being considered. 	<ul style="list-style-type: none"> Data collection is underway Analysis is in the early stages. Information obtained thus far is interpreted correctly, and strategies for identifying patterns and trends and sources of error are presented. 	<ul style="list-style-type: none"> Data collection is nearing commencement. Strategies for analyzing data, identifying patterns and trends and sources of error are presented. 	<ul style="list-style-type: none"> Progress is unsatisfactory. Poor methodology. The execution of work shows flawed understanding and little application of the either background research or prior knowledge. 	
Select mark for C →	17-20	15-16	13-14	9-12	0-9	/20	
Presentation of Report /20	D. Presentation and Grammar	<ul style="list-style-type: none"> Excellent logical structure, physical layout and appropriate attention to detail. The work is presented in an accurate, concise and coherent fashion. Scientific and technical style. No spelling mistakes or grammatical errors. Appropriate referencing to a correctly formatted bibliography. Appropriately acknowledges the work of others. 	<ul style="list-style-type: none"> Very good logical structure, physical layout and attention to detail. The work is presented in an accurate and coherent fashion. Scientific and technical style. No spelling mistakes or grammatical errors. Appropriate referencing to a correctly formatted bibliography. Appropriately acknowledges the work of others. 	<ul style="list-style-type: none"> Good structure, physical layout. Some inaccuracies in presentation of work. Neat, occasional spelling mistakes or grammatical errors. Occasional errors in referencing. Appropriately acknowledges the work of others. 	<ul style="list-style-type: none"> Acceptable structure and physical layout. Some inaccuracies or lack of detail in presentation of work. Neat, some spelling mistakes or grammatical errors. Some errors in referencing or bibliography formatting. Appropriately acknowledges the work of others. 	<ul style="list-style-type: none"> Structure and physical layout detract. Many inaccuracies or considerable lack of detail in presentation of work. Numerous spelling mistakes or grammatical errors. Several errors in referencing or bibliography formatting. Failures to appropriately acknowledge the work of others. 	
	Select mark for D →	17-20	15-16	13-14	10-12	0-9	/20
						Total mark	/100

19 APPENDIX D.3 Project Progress Presentation Marking Criteria

Assessment Component	Fail (0-49)	Pass (50-64)	Credit (65-74)	Distinction (75-84)	High Distinction (85-100)	Mark for Item
A. Use of audio visual aids (manner and method)	<ul style="list-style-type: none"> Text is not readable. Graphics use does not support the presentation. Slide composition format is clearly distracting, obscuring the presentation. Overall poor presentation. 	<ul style="list-style-type: none"> Text is readable with effort. Graphics use rarely Good quality slides and kept to time Slide composition sometimes distracts from the presentation. No eye contact with audience, as entire presentation is read from notes. 	<ul style="list-style-type: none"> Text is readable. Graphics use mostly supports the presentation Slide composition is not visually appealing, but does not detract from the presentation Displays minimal eye contact with audience, while reading mostly from the notes. 	<ul style="list-style-type: none"> Text is easily readable. Graphics use constantly supports the presentation Slide composition has a professional look that enhances the presentation. Consistent use of direct eye contact with audience, but still returns to notes Effective / innovative use of slides/visual aids, good "interaction" with audience 	<ul style="list-style-type: none"> Good quality slides and kept to time Holds attention of entire audience with the use of direct eye contact, seldom looking at notes Effective / innovative use of slides/visual aids, good "interaction" with audience Displays relaxed, self-confident nature about self, with no mistakes. 	Mark for A
Select mark for A →	0-9	10-12	13-14	15-16	17-20	/20
B. Content, Clarity/cohesion of presentation and balanced use of time (matter)	<ul style="list-style-type: none"> Poor sequencing of information No progress beyond literature review Research direction and argument difficult to understand Presentation concluded well short of allowed time, or student needs to be asked to conclude 	<ul style="list-style-type: none"> Inconsistencies in argument, but generally makes sense Progress towards intended outcomes looks sufficient Use of jargon and acronyms without appropriate definition. Literature referenced appropriate Presentation may be a few minutes short, or obviously truncated to fit within the time limit 	<ul style="list-style-type: none"> Sound structure and good technical content Good progress towards intended outcomes Well justified approach/method Sound critique of literature demonstrates understanding of the topic area Engineering terms and jargon used is defined within presentation. Presentation fits within time limit 	<ul style="list-style-type: none"> Presents information in logical sequence which audience can follow. Excellent progress towards intended outcomes Critical analysis and discussion of literature demonstrates deep understanding of the topic area Clear and well thought out research approach linked with literature review Use of engineering terms and jargon mostly matches audience knowledge level. 	<ul style="list-style-type: none"> Presents information in logical, interesting sequence which audience can follow. Advanced progress towards intended outcome, some early results/data presented Clear and well thought out research is clearly informed by literature review Evidence of creativity in research approach Presentation is well timed 	Mark for B
Select mark for B →	0-29	30-38	39-44	45-50	51-60	/60
C. Handling of discussion period (matter)	<ul style="list-style-type: none"> Cannot answer questions about subject 	<ul style="list-style-type: none"> Superficial responses to questioning, indicating limited understanding 	<ul style="list-style-type: none"> Developing understanding of topic area and is able to answer only rudimentary questions. 	<ul style="list-style-type: none"> Confidently responds to all questions, without elaboration. 	<ul style="list-style-type: none"> Demonstrates full knowledge by answering all questions with explanations and elaboration. 	Mark for C
Select mark for C →	0-9	10-12	13-14	15-16	17-20	/20
					TOTAL	/100

Marking Guide

- 100% Very rarely, if ever, given. Must be exceptional presentation and one of the best presentations ever seen.
- 90% Reserved for only the best presentation. Equivalent to Best Conference Paper Award.
- 80% Excellent (very high standard presentation, well thought out, very high quality speaker)
- 70% Very Good (well prepared, well presented, good local conference standard)
- 60% Good (evidence of effort, some problems with presentation, not out of place at local conference)
- 50% Adequate (evidence of minimal effort, presentation lacked planning)
- <50% Poor (badly organised, poor illustrations, poor speaking)

20 APPENDIX D.4 Final Report Marking Criteria

Assessment Component		High Distinction (85-100)	Distinction (75-84)	Credit (65-74)	Pass (50-64)	Fail (0-49)	Mark for Item
Problem Definition /20	E. Literature review	<ul style="list-style-type: none"> Extensive, relevant and logically organized review, analysis, discussion of background material, both specific research and general theory, helps the reader understand the rest of the document, and demonstrates clear mastery of the material in the topic area and ability to synthesize and abstract knowledge. Demonstrates understanding of the impact of recent developments in the field. 	<ul style="list-style-type: none"> Relevant and logically organized review, analysis, discussion of background material, both specific research and general theory, helps the reader understand the rest of document, and demonstrates mastery of the material in the topic area and ability to synthesize and abstract knowledge. 	<ul style="list-style-type: none"> Good review / discussion of background material, with both specific research and general theory, and shows sound understanding of the material in the topic area and ability to synthesize and abstract knowledge. 	<ul style="list-style-type: none"> Acceptable coverage of background material, with both specific research and general theory, and shows developing understanding of the material in the topic area. 	<ul style="list-style-type: none"> A limited coverage of background material, which perhaps flaws in the basic understanding of the material in the topic area are evident. 	
	Select mark for A →	9-10	7-8	6-7	5-6	0-4	/10
	F. Scope of Project and Approach	<ul style="list-style-type: none"> Excellent, clear definition of a substantial and significant research topic, problem and/or hypothesis (including statement of purpose and relevance) and scope (including context, boundaries and assumptions). The abstract accurately yet concisely captures the research topic, methods and outcomes to date. A clear set out plan with goals and methods systematically and logically follows from the background research. The approach demonstrates a high level of creativity and innovation and includes an evaluation of alternative approaches. 	<ul style="list-style-type: none"> Very good definition of substantial research topic, problem and/or hypothesis (including statement of purpose and relevance) and scope (including context, boundaries and assumptions). The abstract accurately captures the research topic, methods and outcomes to date. A clearly set out plan with goals and methods systematically follows from the background research. The approach shows creativity and innovation and includes an evaluation of alternative approaches. 	<ul style="list-style-type: none"> Good definition of an adequate research topic, problem and/or hypothesis (including statement of purpose) and scope (including assumptions). The abstract captures the research topic and outcomes to date. A plan of work follows from the background research. The approach is systematic and includes consideration of alternative approaches. 	<ul style="list-style-type: none"> Satisfactory definition of sufficient research topic, problem and/or hypothesis and scope. The abstract satisfactorily captures the research topic and outcomes to date. A satisfactory plan of work is offered. The approach is systematic, but shows limited consideration of alternative approaches. 	<ul style="list-style-type: none"> Poor or incomplete definition of research topic and scope. The abstract is not clear about the research topic and its outcomes to date. The plan of work offered is incomplete or unclear. The approach is not well considered, and does not logically flow the background research presented. 	
Select mark for B →	9-10	7-8	6-7	5-6	0-4	/10	
Technical Content /60	G. Execution	<ul style="list-style-type: none"> Excellent methodology. The execution of work demonstrates mastery of technical skills. Observations and data collection are made with due regard to accuracy and/or bias. The recording of work undertaken is complete and presented in an appropriate form. Knowledge gained from background research clearly informs the work undertaken. The execution indicates a substantial work effort. 	<ul style="list-style-type: none"> Very good methodology. The execution of work demonstrates excellent technical skills. Observations and data collection are made with due regard to accuracy and/or bias. Knowledge gained from background research is applied. The execution indicates a very good effort. 	<ul style="list-style-type: none"> Good methodology. The execution of work demonstrates good technical skills, shows the application of knowledge gained from background research and a good effort. Observations and data collection are sufficiently accurate and recorded in an appropriate way. 	<ul style="list-style-type: none"> Appropriate work methodology. The execution of work demonstrates developing technical skills. Shows reasonable understanding technical understanding, via some application of prior knowledge and some background research 	<ul style="list-style-type: none"> Poor methodology. The execution of work shows flawed understanding and little application of the either background research or prior knowledge. 	
	Select mark for C →	17-20	15-16	13-14	10-12	0-9	/20
	H. Data analysis and Conclusions	<ul style="list-style-type: none"> Analysis demonstrates mastery of all elements of the research and a high level of independent thought. Information obtained from research activities is interpreted correctly; patterns and trends are recognised where appropriate. Sources of error and limitations of experimental measurements are identified correctly. Critical analysis of results showing deep insight knowledge on the topic. Conclusions are supported by the data. Clear description of the relationship between current findings and the reviewed literature. Discussion of possible applications or implications of the findings. Specific suggestions for future research. 	<ul style="list-style-type: none"> Analysis demonstrates excellent understanding of most elements of the research and independent thought. Information obtained from research activities is interpreted correctly, patterns and trends are recognised and sources of error or limitations of experimental measurements are identified. Conclusions supported by the data. Relationship between current findings and the reviewed literature is discussed. Discussion of possible applications or implications of the findings. Suggestions for future research. 	<ul style="list-style-type: none"> Analysis demonstrates sound understanding of most elements of the research. Information obtained from experimental activities is interpreted, patterns and trends are recognised and sources of error are identified. Results are analysed and conclusions are supported by the data. Discussions of possible applications or implications of the findings. Suggestions for future research. 	<ul style="list-style-type: none"> Analysis demonstrates sufficient of most elements of the research. Information obtained from experimental activities is interpreted, patterns and trends are recognised. Report includes conclusion and some suggestions for future research. 	<ul style="list-style-type: none"> The analysis of the work conducted demonstrates limited comprehension of the topic area. 	
Select mark for D →	34-40	30-33	26-29	20-25	0-19	/40	
Presentation of Report /20	I. Presentation and Grammar	<ul style="list-style-type: none"> Excellent logical structure, physical layout and appropriate attention to detail. The work is presented in an accurate, concise and coherent fashion. Scientific and technical style. No spelling mistakes or grammatical errors. Appropriate referencing to a correctly formatted bibliography. Appropriately acknowledges the work of others. 	<ul style="list-style-type: none"> Very good logical structure, physical layout and attention to detail. The work is presented in an accurate and coherent fashion. Scientific and technical style. No spelling mistakes or grammatical errors. Appropriate referencing to a correctly formatted bibliography. Appropriately acknowledges the work of others. 	<ul style="list-style-type: none"> Good structure, physical layout. Some inaccuracies in presentation of work. Neat, occasional spelling mistakes or grammatical errors. Occasional errors in referencing. Appropriately acknowledges the work of others. 	<ul style="list-style-type: none"> Acceptable structure and physical layout. Some inaccuracies or lack of detail in presentation of work. Neat, some spelling mistakes or grammatical errors. Some errors in referencing or bibliography formatting. Appropriately acknowledges the work of others. 	<ul style="list-style-type: none"> Structure and physical layout detract. Many inaccuracies or considerable lack of detail in presentation of work. Numerous spelling mistakes or grammatical errors. Several errors in referencing or bibliography formatting. Failures to appropriately acknowledge the work of others. 	
	Select mark for E →	17-20	15-16	13-14	10-12	0-9	/20
Total mark							/100
Assessment 1 Participation	5% of total mark (supervisor only)	<ul style="list-style-type: none"> Regular meetings with supervisor and well prepared for the discussion Showing great efforts in resolving challenges during the project 	<ul style="list-style-type: none"> Regular meetings with supervisor, sometimes prepared Showing some efforts in resolving challenges during the project 	<ul style="list-style-type: none"> Some meetings with supervisor, sometimes prepared Showing some efforts in resolving challenges during the project 	<ul style="list-style-type: none"> Few meetings with supervisor, mostly no prepared Showing little efforts in resolving challenges during the project 	<ul style="list-style-type: none"> Rarely meetings with supervisor, rarely prepared Showing little efforts in resolving challenges during the project 	/5
		4-5	3-4	2-3	1-2	0-1	