School of Civil & Resource Engineering

FINAL YEAR THESIS PROJECT
HANDBOOK
2012
CONTENTS

1. Introduction .................................................................................................................................................. 1
2. Deadlines ...................................................................................................................................................... 1
3. Learning Outcomes .................................................................................................................................. 2
4. Assessment .................................................................................................................................................. 2
   4.1 Course Weighted Average .................................................................................................................. 2
   4.2 Thesis Project Unit ............................................................................................................................... 3
   4.3 Award of Pass or Honours .................................................................................................................. 3
   4.4 Assessment Procedures ....................................................................................................................... 3
   4.5 Assessment Criteria ............................................................................................................................. 4
5. Selecting a Project and Supervisor ......................................................................................................... 5
6. Roles of the Supervisor and the Student, and Dispute resolution ...................................................... 6
7. The Road to Successful Completion of Your Thesis Project ..................................................................... 7
   7.1 Literature Survey .................................................................................................................................. 7
   7.2 Experimental Equipment, Computing and Building Access ............................................................. 7
   7.3 Experimental Errors ........................................................................................................................... 7
   7.4 Proposed Timetable of Events ........................................................................................................... 7
8. Early Progress Report ................................................................................................................................. 8
   8.1 Early Progress Report Structure ........................................................................................................ 8
   8.2 Report Submission ............................................................................................................................... 9
9. Seminar Requirements ............................................................................................................................... 9
   9.1 Symposium Proceedings ..................................................................................................................... 10
   9.2 Seminar Schedule ............................................................................................................................... 10
10. Thesis Preparation and Submission ........................................................................................................ 10
   10.1 Thesis Structure ................................................................................................................................. 10
   10.2 Thesis Preparation ............................................................................................................................... 12
   10.3 Thesis Submission ............................................................................................................................... 12
   10.4 Printing and Binding ........................................................................................................................... 12
   10.5 CD ROM ............................................................................................................................................ 12
11. Policy on Plagiarism ................................................................................................................................. 12
12. Occupational Health and Safety ............................................................................................................. 14
13. APPENDIX A: Contact Names .............................................................................................................. 15
14. APPENDIX B: Computer Account Registration Form ......................................................................... 16
15. APPENDIX C: Project Allocation Form ............................................................................................... 17
16. APPENDIX D: Project Allocation Form - Soils Lab ............................................................................. 18
1. INTRODUCTION

The Faculty of Engineering, Computing and Mathematics runs a concurrent honours program. This means that after completing all the requirements for the degree, the student will be awarded the Bachelor of Engineering at either Pass or Honours level, depending on the performance in both course work and the thesis project unit.

The final year engineering project unit goes over two semesters and consists of:

- an early progress report
- a short paper and an oral presentation of your project work at a symposium
- a written thesis.

The following are the final year engineering project units offered by the School of Civil and Resource Engineering:

- Civil Engineering Project Part I (CIVL4101) Civil Engineering Project Part 2 (CIVL4102)
- Mining Systems Project Part I (MINE4111) Mining Systems Project Part 2 (MINE4112)

Students commencing their projects in Semester Two (Mid Year) complete at the end of Semester One of the following year.

This manual will provide you with a variety of information regarding the requirements for your thesis project, the assessment process, the responsibilities of both the student and the supervisor and helpful hints to aid your progress. Further information can be found in the Faculty Handbook.

2. DEADLINES

Project Allocation Form deadlines:

- 4:30 pm Friday 16 March 12 for projects starting in First Semester 12
- 4:30 pm Friday 17 Aug 12 for projects starting in Second Semester 12

Deadline is the Friday of the third week of Semester. Refer to Section 5 and AppendixB.

Early Progress Report deadlines:

- 4:30 pm Monday 14 May 12 for projects starting in First Semester 12
- 4:30 pm Monday 15 Oct 12 for projects starting in Second Semester 12

The Early Progress Report deadline is on the Monday of the third last week of semester. Also refer to the information in Section 8. Late submissions subject to penalty of 20% of the maximum mark per day.
Symposium paper deadlines:

4:30 pm Monday 24 Sep 12 for projects starting in First Semester 12
&
4:30 pm Monday 22 Apr 13 for projects starting in Second Semester 12

The symposium paper deadline is on the Monday of the previous week. Ref: Section 9

Thesis submission deadlines:

12 noon Monday 5 Nov 12 for projects starting in First Semester 12
&
12 noon Monday 3 June 13 for projects starting in Second Semester 12

The Thesis deadline is 12 noon on the first Monday after a semester finishes, see Section 10.

3. LEARNING OUTCOMES

The thesis project will give students the opportunity to

(i) Develop specialised knowledge in a particular field through concentrated research, design and experiment.
(ii) Develop skills in planning and managing a large project.
(iii) Improve writing skills and methods for logical organisation of a major report document.
(iv) Develop and improve oral presentation skills and oral defence of their work.
(v) Develop skills in communicating designs with technical staff for manufacture of equipment.

4. ASSESSMENT

The award of Honours or Pass depends on your performance in coursework over all academic years and your performance in the final year thesis project. The assessment is made at the end of the final year. All projects on offer will have the scope to earn an honours degree. The project unit (12 points) represents approximately 1/4 of a full workload for the final year.

4.1 Course Weighted Average

Your final overall classification (Honours 1, Honours 2A, Honours 2B, Pass) is determined using the "weighted average" (WA), calculated in the following formula:

\[ WA = \frac{\sum M \cdot W \cdot L}{\sum W \cdot L} \]

where:
- WA is the weighted average,
- M is the mark in an individual unit,
- W is the weighting (points value) of that unit, and
- L is the unit "level" (Indicated by the first digit of the final three digits in the course code. Thus, CIVL.4xxx or MINE4xxx would be a Level 4 unit.).
Note that, unlike previous years, the final year project mark is included in this calculation. Also, the concept of an average for each individual year no longer has relevance in this calculation.

The weighted average is calculated using the units that would normally be credited towards the BE, including any elective units taken outside the Faculty. Units taken relating to the non-BE part of a combined degree programme are not included, but does include units that are cross-credited (eg if MATH1010/1020 is taken as part of the BSc, instead of Mathematics 131, then it is included).

4.2 Thesis Project Unit

Your final thesis/project unit mark will be based on an overall assessment of your performance in your project work and on the quality of the various assessable components. As a guide, the following weight will be attached to each component. However, it must be remembered that each component is compulsory and a grade will not be obtained if any component is not completed properly.

<table>
<thead>
<tr>
<th>Component</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Early progress report</td>
<td>5%</td>
</tr>
<tr>
<td>Seminar Paper and Presentation</td>
<td>15%</td>
</tr>
<tr>
<td>Thesis</td>
<td>80%</td>
</tr>
</tbody>
</table>

4.3 Award of Pass or Honours

The award of Honours or Pass is determined from a single Weighted Average (WA), which includes the mark for the Final Project, with a minimum mark required to be achieved in the project for each class of honours.

- Honours 1  Weighted Average (from 4.1) ≥ 76 AND project mark ≥ 70
- Honours 2A Weighted Average (from 4.1) ≥ 71 AND project mark ≥ 65
- Honours 2B Weighted Average (from 4.1) ≥ 66 AND project mark ≥ 60.

A “Pass” will be awarded to those who graduate without meeting any of these requirements.

Students who repeat the final project, the mark for the second attempt only will be considered for the minimum performance requirement, but both results will be included in the calculation of the Weighted Average.

4.4 Assessment Procedures

Your thesis is marked by your supervisor and at least one other assessor. If the mark awarded by two examiners differs by more than 10, or if the span of marks places the student on a borderline between honours grades, or honours and pass, the examiners will be asked to reconsider their assessments in order to resolve the discrepancy. In the event of unresolvable disagreement between examiners, a third examiner will be assigned to adjudicate.

Your supervisor will confer with the other examiner to comment on your initiative and conduct during the project and highlight any extenuating circumstances, such as equipment failure or other factors outside your control that should be taken into consideration.

Your seminar presentation and paper will be marked by all staff members who attend the presentation.
Your **early progress report** will be marked by your supervisor.

### 4.5 Assessment Criteria

Thesis assessors look for a substantial research and/or development effort, clearly expressed, well-written and showing competency and initiative. You must show good communication skills. In general terms, the areas of interest to assessors include:

- Literature review; relationship between past work and present research.
- Logical development of theory, assumptions and experimental apparatus.
- Concise but informative description of how the equipment functions, why the equipment was chosen and the results expected.
- Clear, well-labelled diagrams, tables and equations.
- Logical approach to the project work and the thesis presentation.
- Clear referencing of previous work.
- Concise, clear discussion of results and recommendations.
- Comparison of experimental results with theory, where possible.
- Evidence of initiative (this may be indicated by the Supervisor).

A thesis that is not of sufficiently high presentation standard may be returned to the author with a request that it be resubmitted.

Seminar assessment will be carried out by the academic staff in attendance. They will look for:

- informative seminar notice,
- logical presentation,
- clarity of speech and explanation,
- effective use of visual aids and
- depth of knowledge – as indicated by the presentation and the question period.

A thesis considered to be consistent with **H1** standard (typically a mark greater than 75) will show evidence of excellence in terms of:

1. awareness of previous developments in the subject area;
2. clarity of expression of aims and outcomes of the project;
3. original theoretical development and/or experimental design;
4. use of rigorous or innovative methodology;
5. logic and insight in discussion of the results
6. standard of written English, organisation and format of the thesis.

The seminar presentation will be highly professional and answers to questions will indicate a mastery of the subject. The oral presentation will be clear and audible, and make appropriate use of high quality visual aids. Some students choose to make use of computer presentations (such as Microsoft PowerPoint). However, it is not necessary to do this in order to produce a professional presentation. Carefully prepared overhead transparencies can be equally informative (perhaps more so!). The Assessors will not be inclined to give you a better mark because a
A computer presentation was used. The mark will depend on your oral presentation and how well it is supported by the visual aids – and on your ability to answer questions about the project.

A thesis considered to be consistent with H2A standard (typically marks 69 to 74) will show evidence of excellence in most of the above criteria, but may be weaker in some of the criteria. It will nonetheless be a sound piece of work once again exhibiting excellence in the areas of problem solving and reporting. The seminar presentation will be highly professional and answers to questions will indicate a sound knowledge of the subject.

A thesis considered to be consistent with H2B standard (typically marks 63 – 68) may include some misconceptions or inconsistencies, but they should not affect the basic thrust of the thesis. The thesis should show a high standard of problem solving and reporting skills. The seminar presentation should be highly professional and answers to questions indicative of a sound knowledge of the subject.

A project that has not been conducted according to the above criteria would normally be regarded as Pass standard. A project suitable for a Pass degree may still be carried out with the attributes of excellence indicated above, but with a greatly reduced scope. A student who does not expect or does not want the award of Honours should give consideration to the necessary scope of the project, and discuss the requirements with their supervisor or Head of School. If your chances of qualifying for the award of Honours are negligible, then it may better serve your interests to embark upon a project appropriate to a Pass degree and devote the additional time to other coursework, rather than attempting a project of Honours level quality and scope.

It is highly recommended that before the commencement of the final year of study each student carefully consider their potential for the award of Honours and select a project accordingly. The Head of School will be happy to provide advice. Alternatively, you may wish to discuss your options with potential supervisors.

5. SELECTING A PROJECT AND SUPERVISOR

A list of project topics will be made available on the school website between October – December. Based on the list, you should then consult potential supervisors about projects that interest you and choose an appropriate project. An updated list of project topics will be provided at the end of Semester 1 for students commencing their final year projects at the start of Semester 2.

You are quite welcome to suggest projects of your own design. For example, this may be a continuation of work started while on vacation employment, or just something you are particularly interested in pursuing. If you wish to propose a project, please approach supervisors who are likely to be interested and discuss with them its feasibility in terms of supervision, facilities and other resources. If a staff member is willing to supervise the project then it can go ahead. If you are unsure whom to approach with a project proposal, please contact the Head of School.

You are also welcome to consider projects offered and supervised by staff from outside the Schools. All such proposals must receive approval from the Head of School, and all School requirements for conduct of projects must be observed, including a written project outline and cost estimate before commencing the project. The project must have significant engineering content and should be appropriate and complementary to your course work.

Once you have chosen your project and your supervisor has agreed,
you should submit the "Project Allocation Form" (Appendix C)
to the Administrative Assistant (see contact list, Appendix A).
Deadline is 4:30 pm, third Friday of Semester, ref Section 2.

At the start of your project you will be given a Project Grant Number (PGN) and a sub-class number. These must be quoted for any purchases or work undertaken in the workshop.

6. ROLES OF THE SUPERVISOR AND THE STUDENT, AND DISPUTE RESOLUTION

Your supervisor is there to guide you through the project by providing advice on procedures, equipment and theory. However they will not do the project for you.

At the commencement of the project you and your supervisor should discuss the aims of the project and set targets to be achieved or milestones to be reached along the way for successful completion within the available time.

Your supervisor will wish to be kept informed of your progress and you should therefore agree to meet at regular intervals.

A weekly meeting schedule would not be unreasonable, although more frequent meetings or consultations may be appropriate during some stages of the project, while less frequent meetings may be appropriate during other stages. It is important that each progress meeting be concluded with an agreement to meet again after some prescribed time period or after some task has been completed.

You will be expected to show some initiative and attempt to solve problems yourself, however, if you encounter an insurmountable difficulty you should immediately seek advice from your supervisor. Do not wait for the Supervisor to go looking for you to check on progress.

All equipment, facilities and consumables must be organised by the Supervisor. Any purchases required for the project must be arranged and authorised by the Supervisor, using the usual requisition process.

If the project requires work to be done by technical staff in the workshops, it is the Student's responsibility to prepare drawings and instructions of appropriately high standard for manufacture of the item(s). It is also a requirement that the work be costed by the student. The Chief Technician will be able to assist with this process. All requests for work should be presented to the Chief Technician in writing, as required by School policy. Demand on the workshop is high, and delays of many weeks are not uncommon. The earlier you get your requests in, the more time you will have to carry out the experiments. Any work to be undertaken by the workshop will need prior authorisation by your supervisor.

If you visit the workshop for advice or to borrow a tool or item of equipment, please be polite and remind the staff of your name, your project and your supervisor. They will be happy to assist where possible. If borrowing an item, you may be required to produce your student ID card so that your name and student number can be recorded.

In the event of a dispute arising between you and your supervisor, please feel free to approach the Head of School (HOS). The HOS will investigate the matter, adjudicate and take appropriate action to resolve the dispute. You should also advise the HOS if you do not feel that your supervisor is providing the necessary level of support.
7. THE ROAD TO SUCCESSFUL COMPLETION OF YOUR THESIS PROJECT

7.1 Literature Survey

The purpose of the literature review is to study the research that others have undertaken in the area of interest to you. The first place to start is with your supervisor. Obtain a list of names and papers of key researchers in the area and make a list of key words on the research topic. Then proceed to the library to do the necessary search. The library staff will assist you if necessary. The cost of obtaining photocopies of journal articles is to be met by you.

A literature survey is expected to critically analyse the research undertaken to date in the field of your project, in order to put your work into context. It is not simply a chronological review. You must evaluate each contribution to the subject in terms of its strengths and weaknesses. After reviewing the literature, you should be able to see the background to the project and where your contribution will be made.

7.2 Experimental Equipment, Computing and Building Access

You should discuss with your supervisor your equipment requirements as early as possible.

Much of the equipment required for your research will already be available in the School. Design of equipment or systems should be done in close consultation with your supervisor and the Chief Technician, as described in Section 6.

All items to be purchased must be discussed with and arranged by your supervisor.

Laboratory and building keys are available from the Administrative Assistant.

If your project requires you to use any specialised software and computer equipment for data acquisition and processing you need to discuss your requirements with IT Support as early as possible. (For contact details see Appendix A)

Application forms for establishment of an account are available from the IT support staff (contact details in Appendix A). The completed form should be returned to the IT support staff for processing, after which your account details will be sent to you.

To assist you in taking digital photos, the School has a digital camera that can be booked through the Administrative Assistant.

7.3 Experimental Errors

It is expected that both machine and experimental errors be taken into consideration in your research.

Always calibrate any equipment before use and account for machine error in your measurements. Your experimental procedures should be determined before commencing work and possible experimental errors identified. Your research plan may need to include appropriate statistical error analysis techniques to accommodate these errors. You should discuss errors with your supervisor before commencing work.

7.4 Proposed Timetable of Events

Talk with prospective supervisors and select an appropriate project – October to December in your penultimate year of study. If you are considering commencing your project in 2nd semester, you should still consult with prospective supervisors in this period. You will then have to re-consult with your selected supervisor in the March to May period.
Discuss in detail the objectives, milestones, methodology and resource needs with the supervisor – as soon as possible after selecting a project, but before you start any work. You supervisor may require a plan from you in the early stage of the project.

Literature survey – start as soon as possible. This is a good opportunity to write a summary of the literature, which can constitute the basis of one or more chapters of your final thesis.

Early progress report – Outline the aims and expected outcomes of the project based on literature review, methods and techniques to be employed to conduct the project, and a practical research plan. Deadline: 4:30 pm, Monday of the third last week of semester, ref Section 2.

Experimental Work – You should have your experimental work essentially completed by the middle of second semester.

Seminar Paper – A supervisor-approved four page seminar paper due 4:30 pm Monday 24 September 2012 and 4:30 pm Monday 22 April 2013. This paper will present the results and conclusions of your research efforts. It will form part of the proceedings, which is distributed at the Semester 1 & 2 symposium.

Seminar Presentation – Thursday 4 October & Friday 5 October 2012 and Friday 3 May 2013. A conference-style seminar series will give you the opportunity to present the material contained in your. Staff, students and industry representatives will be in attendance.

Thesis Draft – You should agree with your supervisor on when the draft of your thesis will be handed in.

Thesis Deadline – Deadline: 12 noon on the first Monday after a semester finishes, ref Section 2.

8. EARLY PROGRESS REPORT

8.1 Early Progress Report Structure

A general structure for the early progress report may be:

- Title Page – With your name directly below the title and your supervisor’s name on the bottom of the page
- Introduction – A brief historical background or overview of the field and description of the project and its aims and expected outcomes within the context of this background.
- A brief literature survey
- Methods and Techniques
- Research plan
- The progress so far
- References

The early progress report should be:

- brief but concise with the aims and the expected outcomes being clearly stated in the report
- between 3 to 5 pages in length, excluding the references
- typed in A4 pages with 1.5 line spacing
- typed in a clear font of readable size (eg Times New Roman 12 point)
- 4 cm left-hand margin and 2 cm top, bottom and right hand margins should be used.
8.2 Report Submission

Submit one copy of the early progress report to the Administrative Assistant at the Civil Office by 4:30 pm, on the Monday of the third last week of semester, ref Section 2.

Late submissions are subjected to penalty of 20% of the maximum mark per day.

9. SEMINAR REQUIREMENTS

The purpose of a seminar is to provide experience in preparing and presenting a formal oral description of your work. You will be required to present one seminar at the end of the academic year.

The Semester 2 seminar presentations will take place during a two-day conference-style symposium at which students, staff and industry representatives will be in attendance. Over this two day period, there will be three concurrent streams of student presentations running in different venues. (The Semester 1 seminar presentations will take place at a time to be arranged, with students, staff and industry representatives in attendance.)

Student attendance for the whole symposium is compulsory.

The format of the presentation is reasonably flexible, but in general should consist of the following:

- **Introduction**: An overview of the talk, points of interest to gain the attention of the audience, statement of the aim of the talk, etc.

- **Main body**: Elaboration or justification of any general statements made in the introduction.

- **Conclusion**: A summary of the conclusions or general points raised during the talk.

The total available presentation time is 20 minutes.

Your presentation should comprise:

- 15 minute presentation followed by a
- 5 minute question period (approximately 5 minutes).

Timing of the talk is very important. The only way to gauge the length of your talk during preparation is to **rehearse**, and **rehearse** and **rehearse**.

Rehearsing will also allow you to get the words right and also to become familiar with the use of your visual aids; you will then approach the actual day with more confidence. Despite this preparation, nervousness on the day can cause you to speak faster or slower than expected and it is usually a good idea to have some additional material which can be added or some material marked for possible removal towards the end. Keep track of the time during your talk. The Chairperson will cut your talk short if you run over time.

The presentation should be logically constructed and present information at the appropriate level. **Remember that most of the audience will not be experts in the field of your project.** Please try to provide the audience with enough background and explanation for them to follow your talk. You should try to speak well (also dress well) and present your ideas clearly and simply. A well presented seminar may provide you with an opportunity to make beneficial contact with industry representatives.

Visual aids should be of the highest quality. Use colour for highlighting and make sure that printing is sufficiently large to be seen from the back of the room (try it out in advance). **Try not to**
read your presentation from prepared notes! Properly prepared slides can provide you with memory prompts.

A laptop computer and projector will be available for use at the venue. Be sure it works before your seminar starts.

9.1 Symposium Proceedings

The Semester 2 seminars will be presented during a two day symposium. There will be two concurrent discipline based streams of presentations running in different venues. The presentations will be grouped into sessions of five or six presentations, with ample time for moving between sessions and for external discussion.

The Semester 1 seminar presentations will take place at a time to be arranged, with students, staff and industry representatives in attendance.

All symposium attendees (staff, students and industry representatives) will be provided with a copy of the proceedings document prior to the commencement of the event. This document will contain a copy of each of your four page seminar papers and will be compiled by the School. In order to ensure that the proceedings can be distributed on time, the due date for the symposium paper MUST be adhered to. If you do not hand in your paper by the due date (see Section 2) then you will not be presenting at the symposium! Late submissions are subjected to penalty of 20% of the maximum mark.

Your symposium paper should be of high quality and will likely form the basis of your thesis. With this document you should present the results and conclusions of your research efforts in a clear and concise manner. Your paper will be assessed as part of your final presentation mark.

An example format of a seminar paper can be found at the following web site:

http://www.civil.uwa.edu.au/teaching/final_year_students/

The final format of your paper will largely be dictated by your project. Your paper must not exceed 4 pages. However, as a general guideline a paper might contain the following: Title, Author, Abstract, Introduction, Methods & Procedures, Results & Discussion, Conclusions, Nomenclature, References.

9.2 Seminar Schedule

The timetable that details the venues and times of all seminars will be available at web site

http://www.civil.uwa.edu.au/teaching/final_year_students/

before the symposium. There will be three concurrent streams of presentations separated by discipline. Given the short time frame of the event, you should give some thought to pre-selecting the sessions that are of interest to you.

10. THESIS PREPARATION AND SUBMISSION

10.1 Thesis Structure

A general structure for the thesis may be:

- Title Page
- Synopsis – (abstract)
\begin{itemize}
\item Letter of transmittal
\item Table of contents
\item Nomenclature – A list of symbols and what they mean
\item Introduction – A brief historical background or overview of the field and description of the project and its aims within the context of this background.
\item Literature survey
\item Theory
\item Experimental apparatus and methods, software
\item Discussion of results
\item Conclusions and recommendations
\item References
\item Figures
\item Appendices
\end{itemize}

Tables should be used where appropriate to present a summary of information in a clear and concise manner. Tables may be placed within the body of the thesis or in a section at the end after the references.

The location of figures within the thesis is similarly up to the writer. It is highly preferable to adopt either one method or another, and not place figures within the text and also grouped together at the end as this confuses the reader.

It is generally best to group all figures together at the end because:

\begin{itemize}
\item[(a)] it greatly simplifies the process of writing and assembling the thesis;
\item[(b)] figures can be generated directly from their original source rather than imported into a word processor; and
\item[(c)] the reader often finds it easier to locate particular figures, particularly when flipping between chapters.
\end{itemize}

It is also often a good idea to number figures (and tables) with reference to the chapter number that they are first referred to from. For instance, a diagram of experimental apparatus first described in Chapter 3 might be labelled Figure 3.1. The numbers restart at 1 for each chapter so that if an additional figure is inserted in one chapter, then all the figures in every following chapter do not need to be renumbered.

Just as projects vary widely, the detailed structure of the thesis can vary. Some projects will involve theoretical studies or computer simulation, rather than experiment. In other cases the experimental work may not lend itself to a strong theoretical analysis, and the Theory section may then be reduced or eliminated.

The length of the text content of your thesis is normally no more than 80 pages. You should discuss any variation from this with your supervisor before submission.

Your thesis should be:

\begin{itemize}
\item on A4 pages with 1.5 line spacing.
\item typed in a clear font of readable size (eg, Times New Roman 12 point)
\item 4cm left margin and 2cm top, bottom and right margins
\end{itemize}
• Colour pages should not be used unless it is absolutely necessary.

10.2 Thesis Preparation

Your thesis should be written in a clear and concise manner. Details of procedures or raw data should generally be included in Appendices, not the main body of the thesis. Summary results or sample results can be included in the main body for discussion purposes. Your thesis must describe the research fully but not include excess material that the reader would judge irrelevant. An example of irrelevant material might be a discussion of various equipment failures or other hindrances that might have prevented you from achieving all the outcomes you had expected.

All sources of information, graphs or diagrams must be suitably referenced (see Policy on Plagiarism, Section 11). Referencing of publications may take various forms, but it must be consistent within the thesis. References should be listed at the back of the thesis. Complete information must be included with the reference. Instructions for acknowledging or citing sources can be found at the following internet address:

http://www.library.uwa.edu.au/education_training__and__supportguides/how_to_cite_your_sources

The Harvard style is recommended for the sciences.

Illustrations should be neat, clear and understandable but not overly elaborate. All figures and tables should be numbered and captioned. All equations should be numbered. Figures, tables and equations can then be referred to in the text as Fig. x, Table y and Eq. z, respectively.

Remember that a negative result from an investigation is not necessarily a failure; be open and honest in reporting of your research. Make sure all spelling errors have been corrected. Avoid colloquialisms and define acronyms.

10.3 Thesis Submission

Submit ONE HARD COPY AND ONE COPY ON CD ROM to the Administrative Assistant by the due date and time, ref Section 2.

Late submissions are subjected to penalty of 20% of the maximum mark per day.

10.4 Printing and Binding

All prints/copies must be made at your expense.

The hard copy must be spiral bound (that can be done at the Guild).

10.5 CD ROM

The School will provide one CD and facilities to burn a CD. The form of the thesis must be anything readily readable, for example Rich Text Format documents or standard Microsoft Word documents. The electronic version must be complete, including all figures, data files, equations, photographs and tables. In addition, spreadsheets used to generate the figures must be included.

11. POLICY ON PLAGIARISM

Plagiarism is taking someone else’s thought, writing or invention and claiming it as your own. The Macquarie Dictionary (Delbridge 1981) defines plagiarism as “The appropriation or imitation of another's ideas and manner of expressing them, as in art, literature, etc., to be passed off as one's own.” Plagiarism is regarded by the University as serious misconduct.
Cooperation between students in the form of discussion and mutual tutoring is encouraged. However, cooperation must be distinguished from plagiarism. A student who receives assistance from a fellow student in understanding a principle or how to solve a particular type of problem, for example, is not engaging in plagiarism. If, on the other hand, a student copies the work of a fellow student and submits it for assessment, it is plagiarism.

Examples of plagiarism include:

- failure to reference source material or unpublished work of other people;
- copying text or graphics without quoting the original work and attributing the work to its rightful author;
- one or more students cooperating to complete an assignment or project and then handing in identical submissions unless the assignment or project is clearly designated as a group project;
- one student copying any part of another person's assignment or project unless the assignment or project is clearly designated as a group project.

Instructions for acknowledging or citing sources can be found at the following internet address

http://www.library.uwa.edu.au/education_training__and__support(guides/how_to_cite_your_sources

The Harvard style is recommended for the sciences.

The School of Civil and Resource Engineering has the following policy on plagiarism:

- It is expected that any work submitted for individual assessment by a student will be the student's own work and that any contribution of others will be given appropriate acknowledgment. Contributions may be in the form of ideas, information, text or other printed material.
- Unit coordinators will advise students if group participation is expected in a particular project. In this case, unless otherwise indicated by the unit coordinator, it is expected that students will contribute equally to the total work effort and will receive the same mark. This does not preclude the assignment of different work tasks to individual members of the group. Any contribution from outside the group should be given appropriate acknowledgement.
- If plagiarism of ideas, information, text or other printed material is detected in work submitted for assessment, that work will be assigned a mark of zero. The Head of School will be informed and a note kept on file.
- If collusion between students on work submitted for individual assessment is detected, the mark given to each student will be the total mark divided by the number of students involved. The Head of School will be informed and a note kept on file. If subsequent investigation shows that the work was copied without the consent of the original author, the mark will be set to zero. No penalty will be applied to an innocent party.
- If repeated plagiarism is detected the student will be referred to the Associate Dean, Faculty of Engineering and Mathematical Sciences for disciplinary action under University Statute 17.

If any student believes they have been unfairly treated, they may Appeal Against Academic Assessment, as outlined in the Faculty Handbook. The Faculty policy on plagiarism can be found on the Faculty web site:

http://www.ecm.uwa.edu.au/for/staff/pol/plagiarism

Reference:
12. OCCUPATIONAL HEALTH AND SAFETY

SAFETY DEPENDS ON YOU

Prior to starting any work in laboratories, you are required to follow a safety induction. Please approach the supervisor/deputy supervisor at the respective labs listed below to arrange for your safety induction:

<table>
<thead>
<tr>
<th>Area of Control</th>
<th>Supervisor</th>
<th>Deputy Supervisor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beam centrifuge and eastern end of hangar area (G91)</td>
<td>Conleth O'Loughlin</td>
<td>Manuel Palacios</td>
</tr>
<tr>
<td>Drum centrifuge</td>
<td>Conleth O'Loughlin</td>
<td>Bart Thompson</td>
</tr>
<tr>
<td>Electronics lab</td>
<td>Conleth O'Loughlin</td>
<td>John Breen</td>
</tr>
<tr>
<td>Structures area (western end of hangar area G91b) and driveway</td>
<td>Daniela Ciancio</td>
<td>Jim Waters</td>
</tr>
<tr>
<td>Soils labs (G84, G88 and G99)</td>
<td>Antonio Carraro</td>
<td>Nathalie Boukpeti / Claire Bearman</td>
</tr>
<tr>
<td>Soils lab (G86)</td>
<td>Andy Fourie</td>
<td>Claire Bearman</td>
</tr>
<tr>
<td>Rock mechanics labs (G88c and G88d)</td>
<td>Arcady Dyskin</td>
<td>Boris Tarasov</td>
</tr>
<tr>
<td>Instron</td>
<td>Daniela Ciancio</td>
<td>Wayne Galbraith</td>
</tr>
<tr>
<td>O-Tubes: Shenton Park (includes storage area) and G93</td>
<td>Hongwei An</td>
<td>Alex Duff</td>
</tr>
</tbody>
</table>

It is your responsibility to follow instructions indicated on safety signage in your work area, such as safety procedures and use of personal protective equipment. Use the personal protective equipment!

Protective clothing is your responsibility.

Report all accidents, whether or not injury results, to the School Safety Officer (see contact list, Appendix A). Keep an eye out for hazards and take corrective action if possible or report the hazard to the Safety Officer.

If you have any questions or concerns regarding safety in your work environment, please discuss firstly with your supervisor and then if necessary with the School Safety Officer.
13. APPENDIX A: CONTACT NAMES

<table>
<thead>
<tr>
<th>Position</th>
<th>Name</th>
<th>Room</th>
<th>Email</th>
<th>Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Head of School</td>
<td>W/Prof. Liang Cheng</td>
<td>116</td>
<td><a href="mailto:head@civil.uwa.edu.au">head@civil.uwa.edu.au</a></td>
<td>3076</td>
</tr>
<tr>
<td>Chief Technician</td>
<td>Mr. Neil McIntosh</td>
<td>G85</td>
<td><a href="mailto:neil.mcintosh@uwa.edu.au">neil.mcintosh@uwa.edu.au</a></td>
<td>3886</td>
</tr>
<tr>
<td>System Administrator (IT Support)</td>
<td>Mr Keith Russell</td>
<td>1100a</td>
<td><a href="mailto:support@civil.uwa.edu.au">support@civil.uwa.edu.au</a></td>
<td>1999</td>
</tr>
<tr>
<td>Safety Representative</td>
<td>Mr Bart Thompson</td>
<td>G81</td>
<td><a href="mailto:barto@cyllene.uwa.edu.au">barto@cyllene.uwa.edu.au</a></td>
<td>3742</td>
</tr>
<tr>
<td>Admin. Assistant</td>
<td>Ms Sharna Thompson</td>
<td>114</td>
<td><a href="mailto:sharna.thompson@uwa.edu.au">sharna.thompson@uwa.edu.au</a></td>
<td>2446</td>
</tr>
</tbody>
</table>
14. APPENDIX B: Computer Account Registration Form

THE UNIVERSITY OF WESTERN AUSTRALIA
School of Civil and Resource Engineering

Application for a Unix Account

Return the completed form to: IT Support, Rm 1110A, C&RE General Office, 1st Floor, Eng Bldg

Please supply the details requested below

First Name: 
Last Name: 
Contact Email: 
Room Number: 
Extension Number: 
Supervisor Name: 

Please indicate the group you belong to:

☐ Academic Staff (academic)
☐ General Staff (general)
☐ Visiting Staff (visitors)
☐ Workshop (workshop)
☐ Postgraduate Student (postgrad)
☐ Undergraduate Student (undergrad)

Your preferred login name for the account: __________________

How long do you need the account (eg. 1yr): __________________

Software you intend to use:

______________________________________________________________________________
______________________________________________________________________________

I have read, understood and fully accept the conditions outlined below.

Signature: ___________________________ Date: ______________

CONDITIONS OF USE

1. Your password should be changed regularly.
2. You must not divulge your password to anyone.
3. You must not allow anyone to use your account.
4. You must not corrupt or change any of the system software or hardware.
5. You must not interfere with any other person’s use of the system.
6. You must not transfer any copyright program or other software protected by copyright onto the system.

Any breach of these conditions is likely to result in your account being removed and you may face criminal charges.

OFFICE USE ONLY

Login Name: _______________ Temporary Password (Case-sensitive): _______________

12/07/12
15. APPENDIX C: PROJECT ALLOCATION FORM

School of Civil and Resource Engineering
PROJECT ALLOCATION FORM 2012

Title: .................................................................................................................................................................
.................................................................................................................................................................
Name.................................................................................................................................................................
Student #: ........................................ Email: .................................................................................................

Workshop requirements
☐ None
☐ Low - Minor equipment modification or sample preparation
☐ Medium - Some experimental equipment to be constructed or modified
☐ High - Significant experimental equipment to be constructed

Soils Lab requirements
☐ None
☐ Some - Fill out the attached Soils Lab Student Project Allocation Form (Appendix D)

Note:

1. The Chief Technician should be consulted for all projects with medium or high workshop usage before the project allocation can be finalised.

2. Students who will be working in the labs for their projects must attend a Health & Safety induction session conducted by the lab supervisors/deputy supervisors.

Brief Description of Project Aims and Techniques (a separate page may be attached if space is not enough; if the Soils Lab is to be used, ignore this section and fill out the attached Soils Lab Student Project Allocation Form):

Supervisor’s signature: ......................................................... Date: .........................................................

Chief Technician’s signature: ......................................................... Date: .........................................................
(if applicable)

Soils Lab Deputy Supervisor’s signature: .................. Date: .........................................................
(if applicable)

12/07/12 C&RE HANDBOOK: 2012
16. APPENDIX D: PROJECT ALLOCATION FORM – SOILS LAB

STUDENT PROJECT ALLOCATION FORM

(SUBMIT THIS FORM TO THE SOILS LAB DEPUTY SUPERVISOR)

Form Submission Date: ____________________________________________________

Student Name: __________________________________________________________

Student #: ___________________________ Email: ____________________________________

Supervisor Name: ________________________________________________________

Project Title: ____________________________________________________________

Brief Project Description: ________________________________________________

Testing Requirements:

<table>
<thead>
<tr>
<th>Type of Test</th>
<th>Number of Tests</th>
<th>Tentative Schedule</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note:

1) If equipment is available, lab access will be provided on a first-come, first-served basis by taking into account the Form Submission Date above.

2) Students who will be working in the labs must attend a Health & Safety induction session conducted by lab staff.

Supervisor’s Signature: _____________________________ Date: ______________

Soils Lab Deputy Supervisor’s Signature: __________________ Date: ______________