UNDERGRADUATE THESIS PREPARATION AND SUBMISSION GUIDELINES

ENGG452 and ENGG453

SUBJECT OUTLINE + GUIDELINES 2018: STUDENTS & SUPERVISORS
FACULTY OF ENGINEERING AND INFORMATION SCIENCES

UNDERGRADUATE THESIS
PREPARATION AND SUBMISSION
GUIDELINES

ENGG452  Thesis A  12 Credit Points
ENGG453  Thesis B  18 Credit Points

Guidelines for Students and Supervisors

2018
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1.0 Introduction

1.1 Enrolment
Students commencing their thesis should be enrolled in one of the following:

- **ENGG452 Thesis A (12cp)** - The standard thesis program undertaken by the majority of students completing a thesis.

- **ENGG453 Thesis B (18cp)** - Available only to those students with a weighted average mark (WAM) greater than 75%. Those students enrolling in an 18 cp thesis have the opportunity to undertake one less elective in their course of study.

Thesis A or Thesis B should be completed over two consecutive sessions. Normally the Thesis subject is not offered during Summer Session.

Students commencing the first session of their thesis in Autumn Session must enrol in the annual instance of ENGG452 (12 cp) or ENGG453 (18 cp), not the Autumn or Spring instance of the subject.

Students commencing the first session of their thesis in Spring Session must enrol in the Spring instance of the ENGG452 or ENGG453 in the commencing year and also the Autumn instance of the subject in the following year. Students commencing in Spring session must not enrol in the annual instance of this subject.

Enrolment in ENGG453 can only be accomplished via an “addition of subject form” accompanied by proof of approval from a supervisor and the relevant school thesis coordinator.

It is the student’s responsibility to ensure their enrolment is correct.

<table>
<thead>
<tr>
<th>Thesis Session</th>
<th>cp</th>
<th>Autumn</th>
<th>Spring</th>
<th>Autumn</th>
<th>Student must enrol in:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>12</td>
<td>1st</td>
<td>2nd</td>
<td></td>
<td>ENGG452 – Annual</td>
</tr>
<tr>
<td></td>
<td>18</td>
<td>1st</td>
<td>2nd</td>
<td></td>
<td>ENGG453 – Annual</td>
</tr>
<tr>
<td></td>
<td>12</td>
<td>1st</td>
<td></td>
<td>2nd</td>
<td>ENGG452 – Spring / Autumn (subsequent year)</td>
</tr>
<tr>
<td></td>
<td>18</td>
<td>1st</td>
<td></td>
<td>2nd</td>
<td>ENGG453 – Spring / Autumn (subsequent year)</td>
</tr>
</tbody>
</table>

1.2 Thesis topic and supervisor allocation
In the session prior to the intended commencement of the Annual instance of ENGG452 or ENGG453, you should:
1. Check your eligibility to enrol in the Thesis subject - you must have completed 120 credit points.

2. During the session prior to commencement, you should contact and meet potential supervisor(s) to discuss thesis topics. You can view available thesis topics at [http://eisdb01.adeis.uow.edu.au/fmi/webd](http://eisdb01.adeis.uow.edu.au/fmi/webd). If you come to an agreement with your supervisor regarding your thesis topic, then please send an email containing your student number, thesis topic and supervisor name to the relevant thesis coordinator (cholacha@uow.edu.au for CME students or to brads@uow.edu.au for MM students).
3. If you have a topic confirmed with a supervisor, your selection process is complete. All you need to do is make sure you enrol in the Thesis subject for the next session and your supervisor and topic fields will be automatically populated.

4. If you do not have a topic nearing the end of the session prior to your thesis commencement, you must enter your topic preferences on the online thesis database (http://eisd01.adeis.uow.edu.au/fmi/webd). You can select up to 9 topics on the database before it closes at the end of week 11. Please note that only the topics that remain unallocated will be available through the online allocations. Please note that waiting for the automated online allocations to secure your supervisor and topic may severely limit your choices.

Note: Students enrolling in the Spring/Autumn instance of ENGG452/453 must arrange their thesis topic directly with supervisors. Due to the small number of enrolments, no automated online allocations occur for mid-year thesis commencements.

1.3 Discipline Thesis Coordinators
If students have problems of a general nature they should firstly contact the Discipline Thesis Coordinator.

<table>
<thead>
<tr>
<th>Discipline</th>
<th>Room</th>
<th>Phone</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Civil, Mining and Environmental Engineering</td>
<td></td>
<td></td>
<td><a href="mailto:cholacha@uow.edu.au">cholacha@uow.edu.au</a></td>
</tr>
<tr>
<td>Dr. Cholachat Rujikiatkamjorn</td>
<td>4.132</td>
<td>4221 5852</td>
<td><a href="mailto:cholacha@uow.edu.au">cholacha@uow.edu.au</a></td>
</tr>
<tr>
<td>Mechanical, Materials and Mechatronic Engineering</td>
<td></td>
<td></td>
<td><a href="mailto:brads@uow.edu.au">brads@uow.edu.au</a></td>
</tr>
<tr>
<td>Dr. Brad Stappenbelt</td>
<td>8.103</td>
<td>4221 8188</td>
<td><a href="mailto:brads@uow.edu.au">brads@uow.edu.au</a></td>
</tr>
</tbody>
</table>

1.3 Thesis Objectives
On successful completion of the final year thesis a student should be able to:
(i) Define clearly the aims and objectives of a given problem.
(ii) Retrieve and analyse previous work on related problems (critical literature review).
(iii) Formulate methods for problem solution.
(iv) Plan, design and construct an experimental or theoretical procedure to solve the problem.
(v) Collect data and evaluate findings.
(vi) Communicate conclusions and solutions verbally and in writing.

1.4 Lectures and Workshops
A number of lectures and workshops will be held to give students training in various aspects of thesis preparation. Attendance at these activities is compulsory. The lectures and workshops will be held in weeks 1, 2, 3, 6 and 8 in Session 1 and weeks 4 and 7 in Session 2. Material presented in these lectures is also available on the Thesis e-learning site.

Session 1
Week 1 - Introductions
Week 2 - Learning Development - Writing the proposal
Week 3 - Library – Database Searching
Week 6 - Learning Development - Structuring the thesis
Week 8 - Learning Development - Writing the literature review

Session 2
Week 4 - Learning Development - Presenting data and referencing
Week 7 – Preparing the oral presentation
1.5 **Library Entitlements**
Thesis students are classed as Honours students and as such have Inter-Library Loan privileges. It is advised that students make use of these privileges to gather information for their literature search. Up to five interlibrary loans may be requested over the duration of your thesis.

Honours students are allowed to borrow 15 items for 21 days. Thesis students are also permitted to use the Faculty Computer Laboratories for their research on the recommendation of their supervisor. Thesis students are also welcome to borrow past theses from EIS Central. Students may borrow one thesis for two weeks on presentation of their Student ID card.

1.6 **Responsibilities of Supervisors**
The overriding responsibility of supervisors is to provide continuing support to students throughout their research to enable them to produce a thesis reflective of their academic ability. Specific responsibilities include:

- advising and assisting students to comply with occupational health and safety and ethics requirements where relevant;
- supporting students in developing a proposal for their thesis within the required time frame;
- assisting students to develop a plan for completing their thesis within the stipulated time frame;
- ensuring that the overall work requirements are commensurate with a 12 or 18 credit point thesis;
- ensuring that additional work beyond the agreed scope, particularly additional work close to the submission date, is absolutely necessary and does not unreasonably add to the student’s workload;
- maintaining regular contact with students in order to monitor their progress;
- informing students about any planned absences during the candidature and arrangements for supervision during those absences;
- providing timely and helpful written feedback to students on submitted assessment items and assisting students to develop solutions as problems are identified;
- advising students of inadequate progress or work below the standard generally required and suggesting appropriate remedial action;
- submitting marks for progress reports and oral presentations to the Discipline Thesis Coordinator within 7 days of the feedback date;
- securing an appropriate second marker for the thesis at the time of topic allocation; and
- attending meetings of the academic unit assessment committee where students’ grades are determined.

1.7 **Responsibilities of Students**
The primary responsibility of the student is the timely completion of the thesis and associated assessment tasks. Specific responsibilities include:

- developing a thesis proposal and plan for completing the project within the timeframe stipulated;
- arranging a regular (usually weekly) time for meetings with his/her supervisor(s);
- maintaining regular contact with the supervisor(s);
- presenting required written material to the supervisor(s) in sufficient time to allow for comments and discussions before scheduled meetings;
- undertaking additional work towards their project identified as necessary by the supervisor(s);
- allowing adequate time at the end of Session 2 to account for unpredictable occurrences; and
- accepting responsibility for the quality and originality of all submitted work.
Students are encouraged to develop good organisational practices from the commencement of their thesis. Students should produce a schedule of anticipated activities at the earliest opportunity. The responsibility for successful Project Management lies with each student. A project log should be maintained. This material must accompany any formal request for an extension of a deadline.

Supervisors and students should refer to Tables 2.1 (12 cp thesis) and 2.2 (18 cp thesis) regarding submission and feedback dates.

1.8 Grievances Concerning Supervision
A student who has a question or concern about a decision, act or omission of a member of staff of the Faculty of engineering and information sciences that affects their thesis progress should refer to the Faculty of engineering and information sciences Student Academic Grievance Procedure, which can be found at http://www.uow.edu.au/student/complaints/UOW008298.html#Step2.

Students should attempt to resolve the grievance firstly with the staff member directly involved and then the relevant Discipline Thesis Coordinator before lodging an appeal form.

A list of important University websites relating to codes and policies for thesis students and supervisors can be found in Appendix F.

1.9 Laboratory and Field Work Safety
It is imperative that students work safely in laboratories and the field at all times. In particular, suitable protective footwear must be worn. Thongs and sandals are not acceptable.

A “Risk Assessment Form” relating to the thesis project is to be completed by students and submitted as part of the thesis proposal package. This process is used to identify safety issues related to the proposed work programme and to adequately address these risks (in discussion with the technical staff responsible for the relevant laboratory area and the student’s supervisor). Supervisors are to initial this sheet to ensure that they are 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 thesis, students should introduce themselves to the technical or professional officer responsible for any laboratory in which they will be working.

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.

(a) Staff and students must not work alone in:
   (i) laboratories where chemical substances are handled or housed or where there is a risk of injury from the work being carried out;
   (ii) in areas where power tools or hand tools that could cause injury are used;
   (iii) areas where moving machinery are used.

(b) 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.
Permission to work in laboratories after hours or on weekends may be arranged through the thesis Supervisor. Keys are not issued and students must arrange with EIS Central and Security for access to rooms out of normal working hours (Note: students must give at least one day notice to Security of their access requirements).

1.10 Warning Regarding Progress
If students make insufficient progress during the course of the thesis it is important that they are aware of the effect on their overall degree. A failure in the thesis subject can have a very significant impact on the final weighted average mark (WAM). Since the thesis subject is an annual subject it is possible for a student to withdraw without penalty until the withdrawal date for second Session. If a student does withdraw the student concerned must start a new thesis topic in a subsequent year.

Supervisors should inform students if insufficient progress is made and it is likely that the thesis will not be completed successfully. A key milestone for the purpose of judging adequate progress is the progress report due at the end of first session.

1.11 Difficulties
The vast majority of students complete their thesis without major problems. However, if students are experiencing difficulties at any point in their thesis, they should not hesitate to contact their supervisor and the Discipline Thesis Coordinator. Some tips on how to manage work related stress may be found in Appendix E.
### 2.0 Theses Submission, Deadlines and Assessment Breakdown

#### 2.1 ENGG452 (12 cp Thesis)

<table>
<thead>
<tr>
<th>Assessment Item</th>
<th>Session</th>
<th>Student Deadlines</th>
<th>Supervisor Feedback</th>
<th>Page/Time limit</th>
<th>% Final</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Thesis Project Proposal Package</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Submit one spiral bound copy.</td>
<td>1</td>
<td>Fri 4</td>
<td>Fri 5</td>
<td>5 pages</td>
<td>Pass/Fail</td>
</tr>
<tr>
<td><strong>Progress Report</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Submit one spiral bound copy.</td>
<td>1</td>
<td>Fri 11</td>
<td>Fri 13</td>
<td>At least 30 pages</td>
<td>15*</td>
</tr>
<tr>
<td><strong>Draft thesis</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Submit one spiral bound draft copy.</td>
<td>2</td>
<td>Mon 11</td>
<td>Mon 12</td>
<td>Between 60 and 90 pages not including appendices</td>
<td>Pass/Fail</td>
</tr>
<tr>
<td><strong>Oral Presentation</strong></td>
<td></td>
<td></td>
<td></td>
<td>15min plus 5 min question time</td>
<td>10</td>
</tr>
<tr>
<td><strong>Final Thesis</strong></td>
<td></td>
<td></td>
<td></td>
<td>Between 60 and 90 pages not including appendices</td>
<td>75</td>
</tr>
<tr>
<td>Submit two spiral or hard bound copies of the thesis and one disc or USB thumb drive. An electronic pdf copy must also be submitted through the thesis Moodle site for archiving.</td>
<td>2 Fri 13</td>
<td>-</td>
<td>-</td>
<td>75</td>
<td></td>
</tr>
</tbody>
</table>

* Total: 100%

* up to 15% of the mark may be deducted depending on the number of the lectures/workshops attended.

Descriptions of assessment requirements are provided in part 3 of this document and assessment criteria are provided in appendix B.

Notes for students and supervisors:

1. All assessment items must be submitted at EIS central by 4.30 pm on the specified dates unless otherwise indicated. A date stamped receipt will be given. If any component is not submitted a mark will not be declared and a fail may be recorded.
2. Two academic staff will mark the final thesis. The student will receive the average of these marks. If the marks differ by more than 10% a third marker may be consulted.
3. Student requests for extension should be through SOLS to the Discipline Thesis Coordinator. Students should first discuss this with their supervisor and inform the respective Discipline Thesis Coordinator. Decisions will be communicated to students through SOLS after consultation with the supervisor.
4. All assessment marks are to be entered in SOLS (SMP) by the Discipline Thesis Coordinator. Marks for progress reports and oral presentations will be released to the web within one week after the due date. Feedback can be obtained from supervisor.
5. The relevant Head of School will review all HD thesis grades.
6. Failure to meet these deadlines by the student, supervisor or Discipline Thesis Coordinator may result in a grade not being declared. This could lead to a student not being able to graduate. Students should check their marks for progress report and oral presentation on SOLS.
7. All costs associated with thesis submission must be borne by the student. This includes the cost of thesis binding and media for the electronic copy.
## 2.2 ENGG453 (18 cp Thesis)

<table>
<thead>
<tr>
<th>Assessment Item</th>
<th>Session</th>
<th>Student Deadlines</th>
<th>Supervisor Feedback</th>
<th>Page/ Time limit</th>
<th>% Final</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Thesis Project Proposal Package</strong></td>
<td>1</td>
<td>Fri 4</td>
<td>Fri 5</td>
<td>5 pages</td>
<td>Pass/ Fail</td>
</tr>
<tr>
<td>Submit one spiral bound copy.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Progress Report</strong></td>
<td>1</td>
<td>Fri 11</td>
<td>Fri 13</td>
<td>At least 40 pages</td>
<td>15*</td>
</tr>
<tr>
<td>Submit one spiral bound copy.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Draft thesis</strong></td>
<td>2</td>
<td>Mon 11</td>
<td>Mon 12</td>
<td>Between 90 and 120 pages not including appendices</td>
<td>Pass/ Fail</td>
</tr>
<tr>
<td>Submit one spiral bound draft copy.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Oral Presentation</strong></td>
<td>2</td>
<td>Tue-Fri 12</td>
<td>Fri 12</td>
<td>15min plus 5min question time</td>
<td>10</td>
</tr>
<tr>
<td><strong>Technical Paper</strong></td>
<td>2</td>
<td>Fri 13</td>
<td>-</td>
<td>The paper should be between four and six pages and less than 4000 words</td>
<td>10</td>
</tr>
<tr>
<td>Submit a journal style paper following the template provided by your supervisor.</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>OR</td>
<td></td>
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<td></td>
</tr>
<tr>
<td><strong>Poster Presentation</strong></td>
<td>2</td>
<td>Fri 13</td>
<td>-</td>
<td>A1 size posters only</td>
<td>10</td>
</tr>
<tr>
<td>Submit an A1 size poster directly to your supervisor</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Final Thesis</strong></td>
<td>2</td>
<td>Fri 13</td>
<td>-</td>
<td>Between 90 and 120 pages not including appendices</td>
<td>65</td>
</tr>
<tr>
<td>Submit two spiral or hard bound copies of the thesis and one disc or USB thumb drive at the EIS central. An electronic pdf copy must also be submitted through the thesis Moodle site for archiving.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>100</td>
</tr>
</tbody>
</table>

* up to 15% of the mark may be deducted depending on the number of the lectures/workshops attended.

Descriptions of assessment requirements are provided in part 3 of this document and assessment criteria are provided in appendix B.

Notes for students and supervisors:

1. All assessment items must be submitted at EIS central by 4.30 pm on the specified dates unless otherwise indicated. A date stamped receipt will be given. If any component is not submitted a mark will not be declared and a fail may be recorded.
2. Two academic staff will mark the final thesis. The student will receive the average of these marks. If the marks differ by more than 10% a third marker may be consulted.
3. Student requests for extension should be through SOLS to the Discipline Thesis Coordinator. Students should first discuss this with their supervisor and inform the respective Discipline Thesis Coordinator. Decisions will be communicated to students through SOLS after consultation with the supervisor.
4. All assessment marks are to be entered in SOLS (SMP) by the Discipline Thesis Coordinator. Marks for progress reports and oral presentations will be released to the web within one week after the due date. Feedback can be obtained from supervisor.
5. The relevant Head of School will review all HD thesis grades.
6. Failure to meet these deadlines by the student, supervisor or Discipline Thesis Coordinator may result in a grade not being declared. This could lead to a student not being able to graduate. Students should check their marks for progress reports, poster and oral presentations on SOLS.
7. All costs associated with thesis submission must be borne by the student. This includes the cost of thesis binding, poster production and media for the electronic copy.
2.3 Procedure in the event of a student failing

In the event of a fail for the Thesis subject, this failure will be recorded on the student’s academic record. Following agreement between the Supervisor, Discipline Thesis Coordinator and Head of School, the student may be advised to either:

(a) enrol in ENGG452 (autumn or spring) or ENGG453 (autumn or spring) (as appropriate) and undertake a further semester of study on the original project. Submission of a satisfactory thesis manuscript will then result in a pass in the thesis subject.

or

(b) commence a completely new thesis project, i.e. re-enrol in ENGG452 (annual or spring/autumn) with all assessment requirements to be fulfilled.

Students may apply to withdraw without academic penalty if they have sufficient reason to avoid a fail grade being recorded on their academic record.

2.4 Penalties

2.4.1 Assessment Penalties for Late Submissions

The penalty for late submission of the progress report and poster (for ENGG453 only) is 5% of the total mark available for that assessment item per day unless an extension has been granted by the relevant Discipline Thesis Coordinator. Late submission or failure to submit the thesis project proposal package or draft thesis without an approved extension may result in a fail grade.

Students who fail to submit a final thesis and who have not submitted a formal application requesting an extension one week before the thesis submission deadline will receive a fail grade. Retrospective extensions for the final thesis submission will not be granted except under exceptional extenuating circumstances.

2.4.2 Submission Deadline Extensions

Any request for a thesis assessment component extension must be presented formally through SOLS accompanied by appropriate supporting documentation. The student should first discuss their intention with their supervisor and inform the Discipline Thesis Coordinator that an application has been lodged. This should be submitted at least one week before the deadline. This request must clearly indicate that regular contact has been maintained with your thesis supervisor and that the cause of the delay is beyond the student’s control.

The granting of extensions is at the discretion of the Discipline Thesis Coordinator (with consideration to recommendations from the project supervisor) on the basis of serious medical or compassionate grounds, or other circumstances beyond the student’s control. Students who cannot demonstrate that they have applied good project management and planning strategies will not be granted extensions to deadlines. Students should generally provide a project log to substantiate their claims regarding the management of their project.

2.4.3 Forfeit of Early Graduation

Students submitting their final thesis after the submission deadline (with an approved extension) may not be able to graduate at the scheduled ceremony.

2.4.4 Damaged, Overdue or Lost Theses Borrowed from EIS Central

Students are not permitted to borrow additional theses until outstanding loans have been returned. All borrowed theses must be returned in good condition by Week 12 of Session 2. The cost of repair or replacement of damaged or lost theses must be paid to EIS Central prior to submitting the final thesis. Failure to settle outstanding payments by the due date for the final thesis will result in results being withheld with consequent suspension of graduation eligibility.
2.5 Plagiarism

Plagiarism is the use of another person’s work, or idea, as if it is your own. The other person may be an author, critic, lecturer or another student. When it is desirable, or necessary, to use other peoples’ material, take care to include appropriate references and attribution - do not pretend the ideas are your own. Be sure not to plagiarise unintentionally. Plagiarism has led to expulsion from the University.

The following examples will help you understand some of the common methods for acknowledging your sources. If you have any questions about these methods, check with your supervisor.

Acknowledging Sources of Quotations:
If you copy part of a sentence, whole sentence(s) or paragraph(s) from an article, a book, lecture notes, an essay, report or any other source, it should be put in quotation marks and the article, book or other source should be referenced using an appropriate method as described in appendix D.

Acknowledging Sources of Ideas:
Even if you are not using the exact words of somebody else, it is wrong to use their ideas unless you give appropriate credit.

Paraphrasing:
Paraphrasing is taking the ideas of somebody else and expressing them with different words. Since you are using your own words, you do not need to use quotation marks. However, you must make enough changes so that what you have written is distinctly different, and you must acknowledge your source.

How to Avoid Plagiarism:
Unwitting plagiarism is often the result of poor study methods. The habit of copying verbatim (word-for-word) from a source as you read is dangerous. It is easy to forget that the notes you make are verbatim and to later write them into an essay or report. The only material you should write verbatim are those absolutely delightful, pithy, witty or incisive phrases which you need to make a special point in your report.

The distinction between what needs to be acknowledged and what is common knowledge is not always clear, always play safe and acknowledge.

Refer to the following University website for further detail on plagiarism and acknowledgement practice, available at http://www.uow.edu.au/about/policy/UOW058648.html.
3.0 Assessment Items

3.1 Thesis Project Proposal Package
The thesis project proposal package should include the following items. The necessary pro-forma sheets and/or examples are presented in Appendix A.

- Proposed title
- Aims and objectives
- Proposed work plan and methodology
- Library Research Strategy Form (see Appendix A.8)
- Project log and/or laboratory book preparation (as required by the thesis supervisor)
- Completed resource form (see Appendix A.6). If substantial resources are involved approval must be received from the Head of School.
- Risk assessment form (available from the UOW WHS website)

The thesis supervisor will advise the student when the following are required:

- Faculty induction form
- Induction to the local area e.g. laboratory, workshop etc as required
- Safe Work Procedures (SWP) may be required depending on the project
- Training certification on all equipment and procedures of medium or higher risk
- Workshop form (Appendix A.7) to request construction and/or modification of equipment

3.2 Progress Report
Each student must submit a progress report. It is expected that substantial progress has been made toward thesis completion at the conclusion of the first session. The progress report should be at least 30 pages (ENGG452) or 40 pages (ENGG453) in length.

As a guide to thesis completion progress, at the time of submitting the progress report, students should have:

- finished the bulk of their literature review
- determined the analysis, modelling, experimental or design methodology (depending on the project type)
- commenced the implementation of this method to begin producing results

The progress report must be submitted to Turnitin, an internet-based tool that can assist in detecting plagiarism prior to submission. It is the student’s responsibility to ensure sufficient time is allocated to allow Turnitin to complete its checks and produce a report. After receiving the report from Turnitin students should amend their progress report and submit a hardcopy to EIS Central. Details on how to use Turnitin can be found on the ENGG452/453 e-learning site.

The progress report should consist of the following:

- ENGG452/3 Thesis Progress Report Marking Guide (Appendix B.1)
- Turnitin certificate
- Title page (similar to that provided for the thesis project proposal package – see appendix A.1)
- Abstract
- Refined aims, objectives and scope of the project
- Preliminary thesis chapters including the literature review, methodology and the results obtained to date
- References
- Work plan to thesis completion
3.3 Oral Presentation

One of the ways in which engineers (researchers and practitioners) disseminate engineering knowledge is through technical conferences. The oral presentations will allow you to present your work in a conference/seminar style environment.

- Every student shall give an oral presentation. The presentation should give precise and concise details of the work conducted including the aims, method, achievements and conclusions.
- Presentations will be arranged in conference seminar style. The presenter will outline the details of their work in a 15 minute talk, which will be followed by question time of 5 minutes. Students will be allotted a maximum total of 20 minutes for their presentation.
- Students will be advised two weeks in advance of the venue and time of their presentation by the relevant Discipline Thesis Coordinator.
- Two or more academic staff of the specific discipline will assess each seminar.
- Students are expected to attend at least two other presentation sessions other students in their discipline. Failure to do so may affect the student’s oral presentation mark. Attendance records will be kept.
- Visual aids such as PowerPoint and projector, overhead projectors and a video player will be available in the presentation room. It is the responsibility of students to ensure that their presentation functions satisfactorily on the equipment supplied. If problems are encountered please discuss this with your supervisor well in advance.

The assessment criteria for the oral presentation are detailed in Appendix B.2.

3.3.1 Poster Presentation (ENGG453 (18cp) Thesis only)

Practicing engineers are frequently called upon to present their work effectively in a visually attractive manner. Each student enrolled in ENGG453 should either prepare a poster for display or a technical paper (see section 3.3.2). This decision is made by your supervisor. The poster should illustrate the aims, method, results and conclusions of the thesis.

The poster display must be mounted on A1 size ‘screen board’ sheets of card. The relevant Discipline has the option of retaining the posters, generally on the advice of the thesis supervisor. There is no specified format for posters. Students should present information in such a way that:

- it has a high degree of visual appeal;
- the objectives and details of your thesis project are described, including obtained conclusions;
- other disciplines can easily comprehend the aims and general thrust of the topics concerned;
- the material has a high degree of visual and grammatical clarity.

Two or more academic staff will assess posters based on the assessment criteria detailed in Appendix B.3. Students are strongly advised to have their poster checked by their supervisor prior to final preparation (eg. colour printing and lamination) and submission. PowerPoint page set up can readily generate posters.

Posters should be a two-dimensional graphic display (i.e. no projections) and should not involve any moving parts or be powered in any way.

3.3.2 Technical paper (ENGG453 (18cp) Thesis only)

Practicing engineers and researchers are frequently called upon to present their work in an accurate and concise technical journal paper format. Students of supervisors dictating a technical paper submission rather than a poster should prepare a technical paper of between 4 and 6 pages using the template provided by their supervisor. The paper should clearly communicate the aims, method, results and conclusions of the thesis to an engineering audience familiar with the relevant field of study. It should be no longer than 4000 words unless otherwise arranged with your supervisor. The paper should be submitted directly to your supervisor via email.
3.4 Draft Thesis
A recommended layout of the thesis is as follows:

- Title page
- Acknowledgements
- Abstract
- Table of contents
- List of figures/plates
- List of tables
- Nomenclature
- Main body of the thesis
- References
- Appendices

For further details on the title page, acknowledgements, abstract, table of contents and nomenclature, see Appendix C. Students are also advised to refer to and inspect past theses, particularly those that have been awarded higher grades.

3.4.1 Main Body of the Thesis
The main body of the thesis should 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-referencing.

There is no one right way to structure a thesis. The structure will come out of the questions you pose, the methodology you use and the issues you address. The following examples, however, represent two broad categories that you are encouraged to utilise and manipulate in structuring your thesis.

**Type A:** This structure is appropriate for theses with an experimental basis, involving accounts of procedures, results and discussion.

- The first chapter is an ‘Introduction’. It should include a preamble or introduction to the topic, including a rationale or justification for the work. The chapter should include clearly identifiable and itemised objectives, describe the scope of research and outline the thesis chapter organisation.
- If the thesis contains a significant Literature Review, it is usually provided as the second chapter. If the review of literature is quite small, it may be included as part of the first chapter, perhaps as parts of the preamble and rationale.
- The next chapter is devoted to the theoretical and methodological aspects of the work. These will normally include equations derived, methods of analysis developed, etc. and will usually refer to the literature.
- Verifications of theoretical work should be given in the next chapter or two. For experimental type of work, details should be given of the methods used; test program, instrumentation, experiments etc. The presentation and discussion of results will normally warrant a separate chapter or chapters.
- The final chapter should be reserved for conclusions and recommendations for future work. The conclusions should clearly match the objectives.
- The first and final chapters need to be cohesive and the Abstract (written last but placed first) should complement these two chapters.
Type B: This type of thesis is literature based, discursive in nature and useful for theses that require comparison, discussion, evaluation and analysis. It is NOT suitable for theses that have an experimental basis.

- The first chapter is an ‘Introduction’. It should include a preamble or introduction to the topic, including a rationale or justification for the work. The chapter should include clearly identifiable and itemised objectives, describe the scope of research, the theoretical position adopted and outline the thesis chapter organisation.
- The second and subsequent chapters address distinct aspects of the thesis. Each chapter addresses the literature on the topic of that chapter, seeking to identify views, including conflicting views, and to evaluate the evidence for those views.
- The final chapter concludes the thesis and indicates the position you support, based on the evaluations of the views provided in the body of the thesis. The conclusions should clearly match the objectives. It should also provide recommendations for future research.
- The first and final chapters need to be cohesive and the Abstract (written last but placed first) should complement these two chapters.

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

3.4.2 References
One of two methods of referencing other people’s work should be used. The two acceptable methods are:
(a) by naming the author followed by year of publication (i.e. the Author-date style)
(b) by giving the author’s name and the corresponding number in the reference list

For theses that use many references, method (a) is usually most convenient. Otherwise, method (b) is quite acceptable. For method (a), the listing of references should be in alphabetical order of the names of the authors; for each author the listing should be in order of publication dates. For method (b), 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 D.

3.4.3 Appendices
Material, which if included in the main text, would disrupt the flow of presentation, should be included in the appendices. These include mathematical and numerical details, maps, charts, computer programme listings, work plan and risk assessment. Significant numerical material (e.g. data files, computer output, etc.) should only be presented on the accompanying CD or DVD.

3.4.4 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 formal, third person past tense style. Students experiencing difficulty should consult with the Learning Development Centre for assistance. Should extensive spelling and English corrections be required by the supervisor, students will need to add a statement to this effect (see the example below) at the bottom on the thesis abstract page.

“The majority of work in this thesis is original. However, some assistance with spelling and English has been provided by my supervisor.”
3.4.5 Thesis Formatting Requirements

The draft thesis should be presented in a professional form. The specifications given below should be followed:

(a) The text of the thesis shall be in Times Roman 12 font one and a half (1½) line spacing.

(b) The size of the paper shall approximate ISO paper size A4 (297mm × 210mm), except for illustrative materials such as drawings, maps and printouts on which no restriction is placed. This material must be securely affixed and be arranged to fold outwards and upwards (as need be).

(c) The margins on each sheet shall be not less than 25mm on the bound side and 20mm on the opposite side, 20mm at the top and 20mm at the bottom.

(d) There shall be a title page showing the thesis title, author’s name, degree and date of submission (see Appendix C). No other decoration should be included on this page.

(e) All pages (including diagrams, tables and appendices etc.) shall be numbered consecutively.

(f) Header and Footers should contain the page number only and be void of borders. References should not be placed as footnotes.

(g) Diagrams, tables etc. with proper captions should 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 below the figure whereas table titles should be placed at the top of the table.

(h) The draft and final thesis must be printed double sided.

3.5 Final Thesis

The assessment criteria for the final bound thesis are detailed in Appendix B.4.

Students should undertake all corrections specified by the supervisor in the draft thesis and print a good quality copy for final submission. Two copies of the thesis to be submitted should be spiral bound. A disc or USB drive thumb drive should accompany the hardcopy submission.

For archiving purposes, an electronic pdf copy must also be submitted through the thesis Moodle site. This must follow the file format <Student last name>_<Short topic title>.pdf and be less than 30 characters long. The topic title should be abbreviated or truncated to fit within the character limit.
Appendix A

Thesis Project Proposal Package

The proposal package submission should contain the following:

A.1 Title Page

Draft Title

By

Student Name

Submitted in partial fulfilment of the requirements for the award of the degree of

Bachelor of Engineering
(Discipline)

from

University of Wollongong
Faculty of engineering and information sciences

Month Year
A.2 Aims and Objectives
A statement must be provided describing the aim of the research. Subsequently the student is expected to identify clearly in itemised format the objectives of the research (4 to 6 clear objectives should suffice). Each objective should be a single sentence. This section should be completed in about half a page.

A.3 Proposed Work Plan & Methodology
This section should provide details of your proposed work plan by identifying the major sections of the thesis, the time duration allocated from the start of work in week 1, Session 1 to submission of bound copy in Session 2. A Gantt chart or similar work plan chart may be appropriate. The student should describe the proposed methodology that will enable the project aims and objectives to be achieved.

A.4 Project Log or Laboratory Book Preparation
If required, details for a Project Log or Laboratory Book will be advised by your supervisor(s).

A.5 Risk Assessment Form (WHS Form)
The risk assessment form and details of how to complete can be found at:
A.6 Workshop Form

Engineering Project Form
University of Wollongong
Faculty of Engineering

THE WORK IS REQUIRED FOR:
☐ Civil
☐ Mining
☐ Environmental
☐ Materials
☐ Mechanical
☐ Mechatronics
☐ Physics
☐ Centre for Medical Radiation Phys (CMRP)
☐ Centre for Bulk Solids (BMH)
☐ Faculty
☐ CRC Railways
☐ Sustainable Earth Research Centre (SERC)

☐ Health and Behavioural Science (HBS)

HBS Authorisation:

Important: All lab equipment must be decontaminated to NHMRC standards.

☐ This item does not require decontamination
☐ This item has been decontaminated

DETAIL:
☐ Undergrad Thesis
☐ Postgrad Thesis
☐ Consulting
☐ Academic Research
☐ Teaching Lab/Lab Classes
☐ Research Labs
☐ Maintenance

Description of Work (Attach Drawings)


Priority: ☐ High ☐ Medium ☐ Low

Account No.

IMPORTANT Does this Project require a Risk Assessment? Yes ☐ No ☐
If you answered yes, has the Risk Assessment been completed? Yes* ☐ No ☐

* Attach Risk Assessment.

Requested By ___________________________ Signed ___________________________ Date _____________

Phone: ___________________________ Estimated Hours (Office use) ___________

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Appendix B

Assessment Criteria

The assessment criteria for each of the components of thesis are detailed in sections B.1 to B.4. The overarching criteria for grading a thesis as High Distinction and the minimum requirement to achieve a Pass grade are detailed below.

Criteria for grading a thesis as High Distinction

- The work must be “publishable” at a conference or in a learned journal.
- The English and graphical presentation must be outstanding.
- The work completed should represent the equivalent of that needed to gain an HD in three separate 6 credit point subjects (18 CP thesis) or 2 separate 6 credit point subjects (12 CP thesis).
- The work cannot merely be practical in nature - a substantial amount of theoretical effort must be included.
- The student must demonstrate independent engineering advances and initiative.

Minimum Criteria for grading a thesis as Pass

- The work completed should represent the equivalent of that needed to gain a Pass in two separate 6 credit point subjects (for 12 CP thesis) or three separate 6 credit point subjects (for 18 CP thesis).
- Must include original work, i.e. practical results; theoretical/computation results; or a substantial literature review.
- Must include a substantial discussion of the items in dot point 2 above. The student must demonstrate that he/she has understood and critically evaluated the concepts involved in the project.

B.1 Assessment Criteria for Progress Reports

The progress report should include a clear problem definition (preamble), refined aims, objectives and scope, work completed on preliminary chapters including the literature review, methodology and results to date. The progress report will be assessed according to the following criteria:

Problem Definition (30%)
- Justification of research
- Clear statement of objectives
- Definition of research scope
- Project plan to thesis completion

Content (50%)
- Literature review - relevance, diversity, depth
- Methodology
- Results to date
- Progress towards achievement of aims and objectives

Presentation (20%)
- Grammar, syntax and readability
- Logical structure
- Compliance with thesis guidelines
- Proper referencing
<table>
<thead>
<tr>
<th>Assessment Component</th>
<th>High Distinction (85-100)</th>
<th>Distinction (75-84)</th>
<th>Credit (65-74)</th>
<th>Pass (50-64)</th>
<th>Fail (0-49)</th>
<th>Mark for Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Scope of Thesis and Approach</td>
<td>Excellent, clear definition of a substantial and significant thesis topic, problem and/or hypothesis (including statement of purpose and relevance) and scope (including context, boundaries and assumptions).</td>
<td>Very good definition of substantial thesis topic, problem and/or hypothesis (including statement of purpose and relevance) and scope (including context, boundaries and assumptions).</td>
<td>Good definition of adequate thesis topic, problem and/or hypothesis (including statement of purpose and scope (including assumptions).</td>
<td>Satisfactory definition of sufficient thesis topic, problem and/or hypothesis and scope.</td>
<td>Poor or incomplete definition of thesis topic and scope.</td>
<td>/30</td>
</tr>
<tr>
<td>B. Literature review</td>
<td>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 and ability to synthesize and abstract knowledge.</td>
<td>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 and ability to synthesize and abstract knowledge.</td>
<td>Good review / discussion of background material, with both specific research and general theory, and shows good understanding of the material in the topic and ability to synthesize and abstract knowledge.</td>
<td>Acceptable coverage of background material, with both specific research and general theory, and shows basic understanding of the material in the topic area.</td>
<td>A limited coverage of background material, which perhaps flaws in the basic understanding of the material in the topic are evident.</td>
<td>/30</td>
</tr>
<tr>
<td>C. Interpretation of results collected to date</td>
<td>Analysis demonstrated excellent understanding of all elements of the research and high level of independent thought.</td>
<td>Analysis demonstrated very good understanding of most elements of the research and independent thought.</td>
<td>Analysis demonstrated good understanding of most elements of the research.</td>
<td>Analysis demonstrated sufficient of most elements of the research.</td>
<td>Poor methodology.</td>
<td>/20</td>
</tr>
<tr>
<td>D. Presentation and Grammar</td>
<td>Excellent logical structure, physical layout and appropriate attention to detail.</td>
<td>Good logical structure, physical layout and attention to detail.</td>
<td>Acceptable structure and physical layout.</td>
<td>Structure and physical layout detracts.</td>
<td>/30</td>
<td></td>
</tr>
</tbody>
</table>

Total mark /100
### ENGG452/453 Thesis: Oral Presentations

#### Academic Assessment Form

**Assessor’s Name:**  
**Name of Student:**  
**Discipline:**  
**Project title:**  
**Important Note:** Assessment should take into account the speaker's ability to present the information (voice, audience control, eye contact, enthusiasm, and clarity), how questions are handled at the end of the talk, and how well the speakers keep to time.

<table>
<thead>
<tr>
<th>Assessment Component</th>
<th>Fail (0-49)</th>
<th>Pass (50-64)</th>
<th>Credit (65-74)</th>
<th>Distinction (75-84)</th>
<th>High Distinction (85-100)</th>
<th>Mark for Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Use of audio visual aids (manner and method)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
- Text is not readable.  
- Graphics use does not support the presentation.  
- Slide composition format is clearly distracting, obscuring the presentation.  
- Overall poor presentation. |  
- 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. |  
- 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. |  
- 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 |  
- 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. |  

Select mark for A:  

<table>
<thead>
<tr>
<th>0-9</th>
<th>10-12</th>
<th>13-14</th>
<th>15-16</th>
<th>17-20</th>
<th>/20</th>
</tr>
</thead>
</table>

| B. Content, Clarity/ coherence of presentation and balanced use of time (matter) |  
- Does not sound extensive  
- No results and discussion  
- Only contain literature review and Approach and methodology  
- Audience cannot understand presentation because there is no sequence of information. |  
- Audience has difficulty following presentation because student jumps around  
- Literature referenced inappropriate  
- Addresses few of the content areas.  
- Use of engineering terms and jargon does not match audience knowledge level. |  
- Structure and technical content good  
- Literature referenced appropriate  
- Addresses some of the content areas.  
- Critical analysis and discussion of literature demonstrating understanding  
- Use of engineering terms and jargon minimally matches audience knowledge level. |  
- Presents information in logical sequence which audience can follow.  
- Literature referenced appropriate  
- Addresses most content areas.  
- Critical analysis and discussion of literature demonstrating understanding  
- Use of engineering terms and jargon matches audience knowledge level. |  
- Presents information in logical, interesting sequence which audience can follow.  
- Literature referenced appropriate  
- Addresses all specified content areas.  
- Critical analysis and discussion of literature demonstrating understanding  
- Clear and well thought out research linked with literature review  
- Use of engineering terms and jargon matches audience knowledge level. |  

Select mark for B:  

<table>
<thead>
<tr>
<th>0-29</th>
<th>30-38</th>
<th>39-44</th>
<th>45-50</th>
<th>51-60</th>
<th>/60</th>
</tr>
</thead>
</table>

| C. Handling of discussion period (matter) |  
- Cannot answer questions about subject.  
- Does not have grasp of information. |  
- Uncomfortable with information and is able to answer only rudimentary questions. |  
- At ease with expected answers to all questions, without elaboration. |  
- Demonstrates full knowledge by answering all class questions with explanations and elaboration. |  

Select mark for C:  

<table>
<thead>
<tr>
<th>0-9</th>
<th>10-12</th>
<th>13-14</th>
<th>15-16</th>
<th>17-20</th>
<th>/20</th>
</tr>
</thead>
</table>

**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)
B.3.1 Assessment Criteria for Poster Presentation

Name of Student: ..............................................................

Discipline: ..............................................................

Project title: ..................................................................

<table>
<thead>
<tr>
<th>Item</th>
<th>(Suggested maximum mark)</th>
<th>Marks</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visual Appeal:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Eye Catching</td>
<td>(15)</td>
<td>------</td>
<td></td>
</tr>
<tr>
<td>• Clear Visual Explanation (graphics etc)</td>
<td>(25)</td>
<td>------</td>
<td></td>
</tr>
<tr>
<td>• Grammar/spelling</td>
<td>(10)</td>
<td>------</td>
<td></td>
</tr>
<tr>
<td>Content:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Purpose/objectives adequately described?</td>
<td>(15)</td>
<td>------</td>
<td></td>
</tr>
<tr>
<td>• Details of project covered</td>
<td>(20)</td>
<td>------</td>
<td></td>
</tr>
<tr>
<td>• Comprehensible to a technical audience</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(eg Engineers from other disciplines)</td>
<td>(15)</td>
<td>------</td>
<td></td>
</tr>
<tr>
<td>Assessment Criteria for Technical papers</td>
<td>High Distinction (85-100)</td>
<td>Distinction (75-84)</td>
<td>Credit (65-74)</td>
</tr>
<tr>
<td>----------------------------------------</td>
<td>--------------------------</td>
<td>-------------------</td>
<td>----------------</td>
</tr>
<tr>
<td>A. Adherence to Style</td>
<td>• The document conforms exactly to the given specification.</td>
<td>• The document conforms exactly to the given specification.</td>
<td>The document meets most of the specifications.</td>
</tr>
<tr>
<td>Select mark for A</td>
<td>17-20</td>
<td>15-16</td>
<td>13-14</td>
</tr>
<tr>
<td>B. Written English</td>
<td>• The document contains no spelling errors and only minor grammatical errors. The written style is of a professional standard.</td>
<td>• The document contains no spelling errors and a few grammatical errors. The written style is of a high standard.</td>
<td>• Occasional spelling errors and/or grammatical errors. o A reasonable standard of English.</td>
</tr>
<tr>
<td>Select mark for B</td>
<td>9-10</td>
<td>8-9</td>
<td>7-8</td>
</tr>
<tr>
<td>C. Abstract</td>
<td>• The content and results of the paper are accurately yet concisely summarized.</td>
<td>• The content and results of the paper are accurately summarized.</td>
<td>• The content and results of the paper are summarized.</td>
</tr>
<tr>
<td>Select mark for C</td>
<td>9-10</td>
<td>8-9</td>
<td>7-8</td>
</tr>
<tr>
<td>D. Background Material</td>
<td>• The student has reviewed significant literature in the topic area, and has clearly and concisely presented the necessary background material. The relevance of the reviewed material to the topic area has been clearly shown and meaningful conclusions reached.</td>
<td>• The student has reviewed significant literature in the topic area, and has presented the necessary background material. The relevance of the reviewed material to the topic area has been shown, and meaningful conclusions reached.</td>
<td>• The student has reviewed relevant literature in the topic area, and presented necessary background material. The student shows good understanding of the material and its relevance.</td>
</tr>
<tr>
<td>Select mark for D</td>
<td>17-20</td>
<td>15-16</td>
<td>13-14</td>
</tr>
<tr>
<td>E. Discussion</td>
<td>• The student has reviewed his or her own work, demonstrates excellent understanding and has clearly and accurately illustrated the relevance of the work to the topic area.</td>
<td>• The student has reasonably considered his or her own work, demonstrates very good understanding and has demonstrated the relevance of the work.</td>
<td>• The student demonstrates good understanding of the work conducted and some insight into the relevance of the work.</td>
</tr>
<tr>
<td>Select mark for E</td>
<td>34-40</td>
<td>30-33</td>
<td>26-29</td>
</tr>
</tbody>
</table>

Total mark /100
# Final Thesis Marking Rubric for SUPERVISORS

## Assessment Component

<table>
<thead>
<tr>
<th>Assessment Component</th>
<th>High Distinction (85-100)</th>
<th>Distinction (75-84)</th>
<th>Credit (65-74)</th>
<th>Pass (50-64)</th>
<th>Fail (0-49)</th>
<th>Mark for Item</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A. Literature review</strong></td>
<td>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. Good review / discussion of background material, with both specific research and general theory, and shows good understanding of the material in the topic area and ability to synthesize and abstract knowledge. Acceptable coverage of background material, with both specific research and general theory, and shows basic understanding of the material in the topic area.</td>
<td>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. Good review / discussion of background material, with both specific research and general theory, and shows good understanding of the material in the topic area and ability to synthesize and abstract knowledge. Acceptable coverage of background material, with both specific research and general theory, and shows basic understanding of the material in the topic area.</td>
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</tr>
</tbody>
</table>

## Problem Definition

**Select mark for A**

- Excellent, clear definition of a substantial and significant thesis topic, problem and/or hypothesis (including statement of purpose and relevance) and scope (including context, boundaries and assumptions).
- The abstract accurately captures the thesis topic, methods, and outcomes.
- A clear, well-structured outline with goals and methods systematically and logically follows from the background research. The approach highlights creativity and innovation and includes an evaluation of alternative approaches.

**Select mark for C**

- Excellent methodology.
- The execution of work demonstrates good technical skills, observations and measurements are made with due regard to accuracy.
- The recording is complete and presented in an appropriate form.
- Knowledge gained from background research is applied.
- The execution indicates a substantial work effort.

## Data analysis and Conclusions

**Select mark for C**

- Analysis demonstrated good understanding of all elements of the research and a high level of independent thought.
- Information obtained from experimental activities is interpreted correctly, patterns and trends are recognized 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 literature reviewed.
- Discussion of possible applications or implications of data.

## Presentation of Thesis

- 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.
- Minimal spelling, typographical or grammatical errors. Appropriate referencing to a correctly formatted bibliography.
- Appropriately acknowledges the work of others.

## Student Effort

- Level of understanding
- Appreciation of engineering context
- Leadership in project management

<table>
<thead>
<tr>
<th>Total mark</th>
<th>0</th>
<th>100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total mark</td>
<td>0</td>
<td>120</td>
</tr>
</tbody>
</table>
Appendix C

Thesis sample

Examples of:

C.1 Title Page
C.2 Abstract Page
C.3 Table of Contents
C.4 Notation
C.5 Chapter Presentation

are shown on the following pages.

It is strongly recommended that students examine examples of good theses under the direction of their supervisors.
THESIS TITLE

By

STUDENT NAME

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

BACHELOR OF ENGINEERING
(Discipline)

from

UNIVERSITY OF WOLLONGONG

FACULTY OF ENGINEERING AND INFORMATION SCIENCES

Month (June or November) 201X
ABSTRACT

(250 words maximum)

(One page only)

The abstract is not just a simple summary of the thesis. The following is sourced from http://www.uow.edu.au/content/groups/public/@web/@raid/documents/doc/uow060982.pdf

The role of the abstract is to tell readers:

- WHAT the research is - what question the research is attempting to answer;
- WHY the research was done;
- HOW the research was done - what methodology was used;
- WHAT the results of the research are;
- What the results MEAN.

In effect, the abstract sums up the research.
C.3 Table of Contents

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Abstract iii
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Chapter 6 CONCLUSIONS 96

Chapter 7 RECOMMENDATIONS FOR FUTURE WORK 97

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Appendix A Derivation of Moment - Curvature Formula 99
C.4 Nomenclature

a  length of strip or beam, mm
[A]  transformation matrix for skew strips (Eqn. 5.28)
A,B,C, etc  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

\[
k_m = \frac{m\pi}{\alpha}
\]
[K]  stiffness matrix
m  the general harmonic term
M  bending moment, kNm
Mx  transverse bending moment (relative to transverse x-axis), kNm
My  longitudinal bending moment (relative to longitudinal y-axis), kNm
Mxy  twisting moment, kNm
p  used as suffix for in-plane analysis
p  load, kN

Note  Units must be presented for all variables
Chapter 11

Development of Rock Displacement Instrumentation
System 1 Magnetic Rod Extensometer

11.1 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 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, 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.
Appendix D

Referencing

D.1 Author-date style referencing

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; title of article; full stop; title of journal (abbreviated in conventional manner as desired); comma; volume; comma; part of number; comma; 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; title of book; full stop; series number (if applicable); comma; publisher/s; comma; place of publication (if necessary); full stop.

A portion of typical reference list by author is shown below:


D.2 Numbered references
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 named using this referencing 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 synthesised 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 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:


D.3 Referencing electronic material
Students are advised to refer to the information on Citing Electronic Resources available from the University of Wollongong Library website. Additional material is available from the Learning Development Centre.
Appendix E

Managing Work Related Stress

As you no doubt realise, the final year project and writing up of the thesis 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 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 final year thesis, 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 thesis 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 thesis.

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 thesis 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 thesis completion is invariably associated with good project management and disciplined time management - including the ability to prevent thesis work being swamped by the requirements of your other subjects.
- The student is basically the “project manager” for the thesis - not the supervisor - and is responsible for seeing that the thesis gets done. However you should draw on your supervisor’s experience and guidance regularly throughout the thesis. Regular meetings with your supervisor (weekly or fortnightly) are perhaps the best way to ensure this. The best way of relieving stress in the thesis 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 relevant Discipline Thesis Coordinator of the final year thesis 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.
Appendix F

Key UoW websites
The Student Charter:

Code of Practice - Honours:

Code of Practice - Research:

Teaching and Assessment: Code of Practice – Teaching:

Teaching and Assessment: Assessment and Feedback Policy:

Teaching and Assessment: Subject Delivery Policy:

Coursework Student Academic Complaints Policy

Academic Integrity Policy

Authorship Policy:

Human Research Ethics Forms and Policies:

Code of Practice - Teaching and Assessment:

Code of Practice - Students:

Intellectual Property Policy:
http://www.uow.edu.au/about/policy/UOW058689

IP Student Assignment of Intellectual Property Policy:

IP Student Assignment of Intellectual Property Guidelines:

Research Misconduct Policy:

Student Academic Consideration Policy:
Workplace Health and Safety Policy:

Acknowledgment Practice/ Plagiarism:

Health and Safety:

Risk Management and Risk Assessment Form:

Non-Discriminatory Language Practice and Presentation:

Research Ethics Committees and Guidelines:

Turnitin: