

**FACULTY OF ENGINEERING**

**PREPARATION AND SUBMISSION  
OF  
UNDERGRADUATE THESES**

**ENGG452 and ENGG453**

**Guidelines for Students and Supervisors**

**February 2011**

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**PREPARATION AND SUBMISSION**

**OF**

**UNDERGRADUATE THESES**

<b>ENGG 452</b>	<b>Thesis A</b>	<b>12 Credit Points</b>
<b>ENGG 453</b>	<b>Thesis B</b>	<b>18 Credit Points</b>

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## 1.0 Introduction

Students commencing Thesis should be enrolled in one of the following:

- Thesis A (12cp) - The normal thesis program taken by the majority of students.
- Thesis B (18cp) - Available only to students with a weighted average mark (WAM) greater than 75%. Those who are enrolling in 18 cp thesis have the opportunity to undertake one less elective in their respective course.

Thesis should be completed over two consecutive sessions. Normally Thesis 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) Thesis.

Students commencing the first session of their thesis in Spring Session must enrol in the Spring (commencing year)/Autumn (following year) instance of ENGG452 or ENGG453.

Enrolments deviating from the above programs are incorrect. It is the student's responsibility to ensure their enrolment is correct. Enrolment procedure is summarised in the following table.

	Session Enrolled			
cp	Autumn	Spring	Autumn	Enrol in
12	1 <sup>st</sup>	2 <sup>nd</sup>		ENGG452 – Annual
18	1 <sup>st</sup>	2 <sup>nd</sup>		ENGG453 – Annual
12		1 <sup>st</sup>	2 <sup>nd</sup>	ENGG452 – Spring / Autumn (subsequent year)
18		1 <sup>st</sup>	2 <sup>nd</sup>	ENGG453 – Spring / Autumn (subsequent year)

It is the student's responsibility to arrange regular times for discussion with his/her Supervisor(s). If students have problems of a general nature they should firstly contact the Discipline Thesis Coordinator, refer Appendix A.

Students are encouraged to develop good organisational practices from the outset and should produce a schedule of anticipated activities at the earliest opportunity. The responsibility for successful *Project Management* lies with each student and therefore a detailed project log should be maintained. A work program diagram (e.g. a Time/Task Chart initial and final) or other appropriate material (e.g. project log or laboratory book) should be maintained. **This material must accompany any formal request for an extension of a deadline.**

All costs associated with thesis submission must be borne by the student, this includes the cost of thesis binding and producing the electronic copy.

### 1.1 Introductory Lectures and Workshops

A number of lectures and workshops will be held to give students training in various aspects of thesis preparation. **Attendance of these activities is compulsory.** The lectures and workshops will be held weeks 1 to 4, Session 1 and weeks 1 to 4, Session 2. Material presented in these lectures is also available on the Thesis WEBCT site, this site also contains a other useful information.

### 1.2 Library Entitlements

Thesis students are classed as Honours students and as such have Inter-Library Loan privileges and should make use of these privileges to gather information for their literature search (a maximum of five interlibrary loans may be requested).

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 welcome to borrow past theses from the EEC. Students may borrow one thesis for two weeks on presentation of their Student ID.

### **1.3 Basic Requirements**

Every thesis student shall submit two bound copies and two CD copies of the thesis. The thesis supervisor will retain one copy of the thesis; the other will be kept in the EEC Thesis Library.

### **1.4 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.

### **1.5 Responsibilities of Supervisors and Students**

The following paragraphs are modified extracts from the Code of Practice – Honours and apply specifically to engineering students and supervisors:

#### **1.5.1 Responsibilities of Supervisors**

The overriding responsibility of supervisors is to provide continuing support to students in researching and producing a thesis to the best of the student's ability. Specific other responsibilities are:

- to advise and assist students to comply with occupational health and safety and ethics requirements where relevant;
- to support students in developing a proposal for their thesis within the required time frame;
- to assist students to develop a plan for completing the thesis within the stipulated time frame;
- to ensure that the overall work requirements are commensurate with a 12 or 18 credit point thesis as the case may be;
- to ensure 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 students' work commitments;
- to maintain regular contact with students in order to monitor their progress;
- to inform students about any planned absences during the candidature and arrangements for supervision during those absences;
- to provide timely and helpful written feedback to students on any submissions and to assist them to develop solutions as problems are identified;
- to advise students of inadequate progress or work below the standard generally required and to suggest appropriate action;
- to submit marks from progress reports and the oral presentations to the discipline thesis coordinator within 7 days of the feedback date;
- to determine the second marker, in consultation with the discipline thesis coordinator, at the time of allocation of the topic;
- to attend meetings of the academic unit assessment committee where students' grades are determined.

## 1.5.2 Responsibilities of Students

Students have the primary responsibility for the timely completion of the thesis and other assessment tasks. Specific responsibilities are:

- to develop a thesis proposal and plan for completing the project within the timeframe stipulated elsewhere in this document;
- to maintain regular contact with the supervisor(s);
- to present required written material to the supervisor(s) in sufficient time to allow for comments and discussions before scheduled meetings;
- to undertake additional work towards their project identified as necessary by the supervisor(s);
- to leave adequate time at the end of session 2 to account for unpredictable occurrences;
- to accept responsibility for the quality and originality of all submitted work.

**Supervisors and students should refer to tables 7.1 (12 cp thesis) and 7.2 (18 cp thesis) regarding submission and feedback dates.**

## 1.5.3 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 that affects their thesis progress should refer to the Faculty of Engineering Student Academic Grievance Procedure, which can be found at:

<http://www.uow.edu.au/eng/about/policies/grievances.html>

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

## 2.0 Thesis Project Proposal Package

**Due: S1, Monday Week 5. Feedback: S1, Friday Week 6.**

A copy of the Thesis Project Proposal Package for each student is to be retained by the thesis supervisor. This package should include the following items. The necessary pro-forma sheets and/or examples are presented in Appendix B.

- Proposed title
- Aims and objectives
- Proposed work plan and methodology
- Library Research Strategy Form (See Appendix H)
- Project log and laboratory book preparation (if required by the thesis supervisor)
- Completed resource form (If substantial resources are involved approval must be received from the Head of School)
- Risk assessment/OH&S form (when required, supervisor will advise)
- \*Faculty induction form
- \*Risk assessment form for all projects (available from the UoW OHS website)
- \*Induction to the local area eg laboratory, workshop etc as required
- \*Other documents such as Safe Work Procedures (SWP) may be required depending on the project
- \*Training as required on all equipment and procedures of medium or above risk

**\*A copy of all documents must be filed with the Engineering Faculty Office (4.109a)**

### **3.0 Progress Report**

The progress report must be submitted to Turnitin, an internet-based tool for detecting plagiarism. After receiving the report from Turnitin, students should update their progress report and submit a hardcopy, together with the Turnitin certificate, as per the normal process. Details on how to use Turnitin can be found on the ENGG452/453 e-learning site.

**Due: S1 of thesis, Monday Week 11. Feedback: S1, Friday Week 13.**

Each student must submit a progress report. This report should consist of the following:

- Assessment criteria (Appendix C.1)
- Title page
- Abstract
- Refined aims, objectives and scope
- Preliminary chapters including literature review
- Results obtained to date

### **4.0 Oral Presentation**

**Due: S2, Monday-Friday Week 10. Feedback: S2, Friday Week 10.**

- Every student shall give an oral presentation. The presentation should give precise and concise details of work conducted to date including the aims, achievements and likely conclusions.
- Presentations will be arranged in seminar style, i.e. the candidate 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 of 20 minutes for their presentation.
- The seminar program will be conducted during Week 10 of the second session of enrolment. Students will be advised, by Week 8, of the venue and time for 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 all presentations by all other students in their discipline (without interference with their normal lecture/tutorial attendance in other classes).
- Visual aids such as PowerPoint and projector, overhead projectors and a video player will be available in the presentation room. However, it is the responsibility of students to ensure that PC/audio/visual equipment they require is available and functioning satisfactorily. If problems are encountered please discuss this with your supervisor.

The assessment criteria are detailed in Appendix C.2.

#### **4.1 Poster Presentation (*18cp Thesis Only*)**

Practicing engineers are frequently called upon to present their work effectively in a visually attractive manner. Each student enrolled in 18 cp thesis will prepare a poster for display in Week 12

of the 2nd Session of enrolment. The poster is to illustrate their thesis topic and progress of the project to that point in time.

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. However, 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;
- visitors from 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 C.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 graphic display essentially two-dimensional in character (with no projections) and should not involve any moving parts or be powered in any way.*

## **5.0 Draft Thesis**

**Due: S2 of thesis, Friday Week 11. Feedback: S2, Friday Week 13.**

### **5.1 Layout**

A recommended layout of the thesis is as follows:

- Title page
- Acknowledgements
- Abstract (not more than 250 words)
- Table of contents
- List of figures/plates
- List of tables
- Notation (and units)
- Main body of thesis
- References
- Appendices

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

## **5.2 Presentation**

### **5.2.1 Main Body of 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 organization.
- 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 organization.
- 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. shall 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. Should a table or figure be arranged in landscape mode the page should read away from the thesis spine.

### 5.2.2 References

One of two methods of referring to other people's work should be used. The two acceptable methods are:

- (a) by naming the author followed by year of publication;
- (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 E.

### 5.2.3 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. However, significant numerical material (e.g. data files, computer output, etc.) should only be presented on the CDs.

### 5.2.4 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 third person past tense and formal style. Test procedure description/s may be written in alternate person and tense. Students experiencing difficulty should consult with the Learning Development Centre for assistance.

Should extensive spelling and English corrections be necessary by the supervisor, students will be required to add the Disclaimer Statement.

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

This disclaimer must appear at the bottom on the thesis abstract page.

### 5.2.5 Word Processing

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

The specifications given below shall 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 thesis title, author's name, degree and date of submission (see Appendix D). 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, shall appear on pages close to where reference is first made to them. Photographs should be included as 'jpg' or 'gif' objects in the word document. Figure and photograph titles should be placed below the figure whereas table titles should be placed at the top of the table.
- (h) The draft thesis may be printed double sided, but the final thesis must be printed single sided.

**6.0 Final Bound Thesis**

**Due: S2, Friday Week 15 (Friday Week 1 of examination period).**

The assessment criteria for the final bound thesis are detailed in Appendix C.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 shall be bound in boards with the spine lettered as follows:

- (a) at the bottom and across - UW
- (b) 70mm from the bottom and across, with degree and year of submission, for example  
BE  
201X
- (c) evenly spaced between the statement of the degree and year, and the top of the spine, the name of the author, initials first and then surname, reading either across or upwards in one line.

The colour of the covers shall be in accord with the following table:

Civil	Navy Blue
Environmental	Green
Materials	Maroon
Mechanical	Navy Blue
Mechatronics	Navy Blue
Mining	Black

Students should allow at least one week for binding. Names, contact and address details of suitable thesis binders may be obtained from the EEC.

## 7.0 Theses Submission, Deadlines and Assessment Criteria

### 7.1 (12 cp Thesis)

Section/Item	Session	Student Deadlines		Supervisor Feedback		Page limit as a guide/ Time limit	% Final
		Day	Wk	Day	Wk		
<b>2.0 Proposal Package:</b> (Topic, problem definition, aims and objectives, methodology, resources, work plan and OHS issues ie Risk Assessment, Local area induction, SWP)	1	Mon	5	Fri	6	5 pages	None
<b>3.0 Progress Report:</b> (Submission of introductory chapters – clear problem definition , refined aims, objectives and scope, preliminary chapters including literature review and results to date, Risk Assessment completion/Review. The ENGG452/3 Thesis Progress Report Marking Guide C.1 should be included)	1	Mon	11	Fri	13	15-20 pages	10*
<b>4.0 Oral Presentation:</b> (Thesis seminar- Use of aids such as overheads, PowerPoint etc, technical and other content, delivery, time management and answers to questions)	2	Mon-Fri	10	Fri	11	15min present. plus 5-10 min question	20
<b>5.0 Draft thesis:</b> (Submission of one spiral bound draft copy for comments/corrections from the main supervisor)	2	Fri	11	Fri	13	Approx. 60 pages without appendix	None
<b>6.0 Final Thesis:</b> (Abstract, match objectives and conclusions, review and references, presentation and content). Submit two hardbound copies of the thesis and two CD's.	2	Fri	15*	-	-	Approx. 60 pages without appendix	<b>70</b>
<b>Total</b>							<b>100</b>

### NB Detailed assessment criteria are given in appendix C

\*Week 15 is the first week of exams.

Notes for students and supervisors:

- All submissions and collections are to be done at the EEC by 4.30 pm on the specified dates. A date stamped receipt will be given. If any component is not submitted, eg hardbound or electronic copies of the final thesis, a mark will not be declared and a fail may be recorded.
- Two academic staff will mark the final thesis and oral presentation. The student will receive the average of these marks. If the marks differ by more than 10%, a third marker will be consulted. Outliers will be omitted and an average taken.
- Detailed assessment criteria for progress reports, oral presentations and the final bound thesis are provided in appendix C.
- 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.
- Late submissions (without an approved extension) will incur a penalty of 3% of the total mark available for that particular component per working day.
- 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 of the due date for supervisor feedback.
- The relevant Head of School will review all HD thesis grades.
- 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 at the end of session 2. Students should check their marks for progress report and oral presentation on SOLS.

**\* mark will be deducted up to 15% of the total mark based on the number of the attendances.**

## 7.2 (18 cp Thesis)

Section/Item	Session	Student Deadlines		Supervisor Feedback		Page limit as a guide/ Time limit	% Final
		Day	Wk	Day	Wk		
<b>2.0 Proposal Package:</b> (Topic, problem definition, aims and objectives, methodology, resources, work plan and OHS issues ie Risk Assessment, Local area induction, SWP)	1	Mon	5	Fri	6	5 pages	None
<b>3.0 Progress Report:</b> (Submission of introductory chapters – clear problem definition (preamble), refined aims, objectives and scope, preliminary chapters including literature review and results to date, Risk Assessment Completion/Review. The ENGG452/3 Thesis Progress Report Marking Guide C.1 should be included)	1	Mon	11	Fri	13	15-20 pages	10**
<b>4.0 Oral Presentation:</b> (Thesis seminar- Use of aids such as overheads, power point etc, technical and other content, delivery including eye contact and time management, answers to questions)	2	Mon-Fri	10	Fri	11	15min present. plus 5-10 min question	15
<b>4.1 Poster Presentation:</b> (Develop a poster as per guideline given in section 4.1)	2	Mon	12	Fri	12		10
<b>5.0 Draft thesis:</b> (Submission of one spiral bound draft copy for comments/corrections from the main supervisor)	2	Fri	11	Fri	13	Approx. 90 without appendix	None
<b>6.0 Final Thesis:</b> (Abstract, match objectives and conclusions, review and references, presentation and content). Submit two hardbound copies of the thesis and two CD's.	2	Fri	15*	-	-	Approx. 90 pages without appendix	65
<b>Total</b>							<b>100</b>

### NB Detailed assessment criteria are given in appendix C

\*Week 15 is the first week of exams.

Notes for students and supervisors:

1. All submissions and collections are to be done at the EEC by 4.30 pm on the specified dates. A date stamped receipt will be given. If any component is not submitted, eg hardbound or electronic copies of the final thesis, a mark will not be declared and a fail may be recorded.
2. Two academic staff will mark the final thesis and oral presentation. The student will receive the average of these marks. If the marks differ by more than 10%, a third marker will be consulted. Outliers will be omitted and an average taken.
3. Detailed assessment criteria for progress reports, oral presentations and the final bound thesis are provided in appendix C.
4. 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.
5. Late submissions (without an approved extension) will incur a penalty of 3% of the total mark available for that particular component per working day.
6. All assessment marks are to be entered in SOLS (SMP) by the Discipline Thesis Coordinator. Marks for progress reports, oral and poster presentations will be released to the web within one week of the due date for supervisor feedback.
7. The relevant Head of School will review all HD thesis grades.
8. 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 at the end of session 2. Students should check their marks for progress report, oral and poster presentation on SOLS.

**\*\* mark will be deducted upto 15% of the total mark based on the number of the attendances.**

### **7.3 Procedures Undertaken in Event of Student Failing to Pass**

In the event of a fail (this failure will be recorded) and 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) start a completely new thesis project, i.e. re-enrol in ENGG452 (annual or spring/autumn) - all assessment requirements to be fulfilled.

## **8. Penalties**

### **8.1 Assessment Penalties for Overdue Submissions**

The penalty for overdue submissions is 3% of the total mark available for that particular component per working day or 15% per week.

### **8.2 Submission Deadline Extensions**

Any request for a thesis assessment component extension must be presented formally through SOLS with appropriate supporting documentation. The student should first discuss with their supervisor and inform the Discipline Thesis Coordinator that an application has been lodged. This must be submitted at least one week prior to 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. Include any supporting information.

Generally, extensions will only be granted at the discretion of the Discipline Thesis Coordinator (based on recommendations from the supervisor) and 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 the best project management and planning strategies will not be granted extensions to deadlines.

Students not completing the thesis requirements and who do not submit a formal application requesting an extension by the end of week 14 of the second session of enrolment, will receive a fail grade.

### **8.3 Forfeit of Early Graduation**

Students failing to submit their final bound thesis by Week 15 may not be able to graduate at the scheduled ceremony.

### **8.4 Damaged, Overdue or Lost Thesis Borrowed from the EEC**

Students are not allowed to borrow additional theses until outstanding loans have been returned. All borrowed theses must be returned by Week 12 and be returned in good state of repair. The cost of repair or replacement of lost or misplaced theses must be paid to the EEC prior to submitting your bound thesis. Failure to settle outstanding payments by the due date for the bound thesis (Week 15), will result in your results being withheld and graduation eligibility suspended.

## **9. Safety in Laboratories and Field Work**

It is imperative that students' work safely in the laboratories/field at all times. In particular, substantial footwear must be worn. Thongs and sandals are not acceptable.

A "Risk Assessment Form" relating to your thesis project is to be completed and submitted in week 5 as part of the thesis proposal package. This is to identify safety issues relating to your proposed work programme and come to an agreed means of addressing these issues (in discussion with the technical staff responsible for the relevant laboratory area and your supervisor). Your supervisor is to initial this sheet to ensure that he/she is aware of the major safety considerations and the agreed actions to be taken. If there are significant departures from the original programme of work this sheet may need to be updated and a new form submitted.

At the commencement of their 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.*

Letters giving permission to work in laboratories after hours or at weekends may be arranged through your Supervisor (you must be accompanied by another adult at all times). Keys are not issued and students must arrange with the EEC and Security for access to rooms out of normal working hours (**Note:** give Security notice of at least one day of your requirements).

## **10. Rate of Progress**

If students make insufficient progress during the course of the thesis it is important for that they be aware of the effect on their overall degree. A failure in your thesis can have a very significant impact on your final WAM. Since the thesis subject is an annual subject it is possible for a student to withdraw up until the date set in second session for withdrawal without penalty for annual subjects. In such an event the student concerned must start a new thesis topic the following year.

The vast majority of students complete their thesis without major difficulty. However, if you are having difficulties at any point in your thesis for whatever reason, do not hesitate to contact your supervisor and the Discipline Thesis Coordinator. If you need to know how to manage work related stress, see Appendix F.

## 11. 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 the thesis manual.

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

This means taking the ideas of somebody else and express 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.

### **Caution**

Students will be alerted if the draft copy of the thesis is found to contain material, which is suspected of being plagiarised. Penalties will be applied if the student ignores the advice and direction from the thesis supervisor.

Refer to the following University website for further detail on **plagiarism** and acknowledgement practice:

<http://www.uow.edu.au/about/policy/UOW058648.html>

## **Appendix A**

### Discipline Thesis Coordinators

School	Name	Room	Phone	Email
Civil, Mining and Environmental	Dr. Cholachat Rujikiatkamjorn	4.132	4221 5852	<a href="mailto:cholacha@uow.edu.au">cholacha@uow.edu.au</a>
Mechanical Materials Mechatronics	Prof. Zhengyi Jiang	8.116	4221 4545	<a href="mailto:jiang@uow.edu.au">jiang@uow.edu.au</a>

## **Appendix B**

### **Thesis Project Proposal Package**

The following presents examples and necessary pro-forma sheets for completion and submission by Monday Week 5. For completeness the Week 5 submission should contain the following:

#### **B.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

Month Year

## **B.2 Aims and Objectives**

This section is one of the most important one. A statement can be provided on the aim of the research. Subsequently the student is expected to identify clearly in itemised format the clear objectives of the research. A guide is to come out with 4 to 6 clear objectives. Each objective should be a single sentence. This section can be completed about half a page.

## **B.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 week 15 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.

## **B.4 Project Log or Laboratory Book Preparation**

If required, details for a Project Log or Laboratory Book will be advised by your supervisor/s.

## **B.5 Risk Assessment Form (OH&S Form)**

The risk assessment form and details of how to complete can be found at:

<http://www.uow.edu.au/admin/personnel/ohs/>

**B.6 Resource Requirements Form**

**Faculty of Engineering Thesis Resource Requirements**

**Student Name**

**Thesis Supervisor(s)**

**Thesis Title**

**Note: Only a modest budget is allowed for external expenditure towards an undergraduate thesis with priority being given to continuing projects.**

No.	DESCRIPTION	COST THIS ITEM	RUNNING TOTAL
2			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			

NOTE: You should keep a log of all material and resources used and purchases made (including actual expenditure) during the course of your Thesis.

## APPENDIX C

### Introduction

The assessment criteria for each of the components of thesis are detailed in sections C.1 to C.4. The overarching criteria for grading a thesis as High Distinction or the minimum requirement to achieve a Pass Conceded 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 Conceded

- The work completed should represent the equivalent of that needed to gain a Pass Conceded 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, ie 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.

### C.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 literature review and results to date. The progress report will be assessed according to the following criteria and a mark out of 10 awarded:

#### Problem Definition (30%)

- Justification of research
- Clear statement of objectives
- Definition of research scope
- Project plan

#### Content (50%)

- Literature review - relevance, diversity, depth
- Interpretation of results to date
- Progress towards achievement of aims and objectives

#### Presentation (20%)

- Grammar and syntax
- Compliance with thesis guidelines
- Proper referencing

**C.1**

**ENGG452/3 Thesis Progress Report Marking Guide**

Name of student:	Date submitted:	Thesis title:	
Name of marker:	Total no. of pages* :	No. of pages of main text:	Turn It In report attached?
<b>A) Problem Definition</b> <ul style="list-style-type: none"> <li>• Justification of research</li> <li>• Clear statement of objectives</li> <li>• Definition of research scope</li> <li>• Project plan (eg. experimental design)</li> </ul>	<b>Comments</b>		<b>Mark</b>
			<b>/30</b>
<b>B) Content</b> <ul style="list-style-type: none"> <li>• Literature review: relevance, diversity, depth</li> <li>• Interpretation of results collected to date</li> <li>• Progress towards achievement of aims</li> </ul>	<b>Comments</b>		<b>Mark</b>
			<b>/50</b>
<b>C) Presentation</b> <ul style="list-style-type: none"> <li>• Grammar, syntax and “visual appeal”</li> <li>• Compliance with thesis guidelines (eg. word limit)</li> <li>• Proper referencing</li> </ul>	<b>Comments</b>		<b>Mark</b>
			<b>/20</b>
	<b>Final Mark : A) + B) + C)</b>		<b>/100</b>
<b>D) Plagiarism Check</b> A receipt from the plagiarism checking software “TurnItIn” must be attached to the progress report. The actual report is for student self checking and discussion with supervisor during feedback session in week 13.	<b>Comments on TURNITIN report** to be completed when students bring report to feedback meeting.</b>		

\* 15-20 pages is the suggested page limit for progress reports

\*\* The TurnItIn report is designed to teach students how to avoid plagiarism. Refer to Section 11 of the Thesis Guidelines for more information on plagiarism. Students are reminded that penalties will be applied if the student ignores the advice and direction from the thesis supervisor relating to plagiarism.

### C.2 Assessment Criteria for Oral Presentations

Name of Student: .....  
 Discipline: .....  
 Project title: .....

	Marking scheme	
(A) Use of audio visual aids (manner and method)	...../20	
(B) Content, Clarity/cohesion of presentation and balanced use of time (matter)	...../60	
(C) Handling of discussion period (matter)	...../20	
<b>General Comments</b>		<b>Total Mark (A) + (B) + (C) =: (%).....</b>
<b>Name of Assessor</b>		<b>Date:.....</b>

### C.3 Assessment Criteria for Thesis Posters

Name of Student: .....  
 Discipline: .....  
 Project title: .....

Item	(Suggested maximum mark)	Marks	Comments
<b>Visual Appeal:</b>		.....	.....
• Eye Catching	(15)	.....	.....
• Clear Visual Explanation (graphics etc)	(25)	.....	.....
• Grammar/spelling	(10)	.....	.....
<b>Content:</b>		.....	.....
• Purpose/objectives adequately described?	(15)	.....	.....
• Details of project covered	(20)	.....	.....
• Comprehensible to a technical audience (eg Engineers from other disciplines)	(15)	.....	.....
<b>General Comments</b>		<b>Total Mark: (%).....</b>	
<b>Name of Assessor</b>		<b>Date:.....</b>	



## Appendix D

### Typical Title Page, Table of Contents, Notation and Chapter Presentation

Examples of:

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

are shown on the following five pages.

**D.1 Title Page**

**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**

**Month (June or November) 201X**

## **D.2 Abstract Page**

### **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.

### D.3 Table of Contents

#### TABLE OF CONTENTS

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#### D.4 Notation

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
[B <sub>b</sub> ]	matrix of coefficients relating curvatures to displacement amplitudes
[B <sub>p</sub> ]	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 <sub>m</sub>	$= \frac{m\pi}{\alpha}$
[K]	stiffness matrix
m	the general harmonic term
M	bending moment, kNm
M <sub>x</sub>	transverse bending moment (relative to transverse x-axis), kNm
M <sub>y</sub>	longitudinal bending moment (relative to longitudinal y-axis), kNm
M <sub>xy</sub>	twisting moment, kNm
p	used as suffix for in-plane analysis
p	load, kN

**Note** Units must be presented for all variables

## **D.5 Chapter Presentation**

### **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 E

### Method of Referencing and Reference Listing

#### E.1 Reference by Naming Authors

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

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

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

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

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

The corresponding reference listing should follow the styles below:

#### (a) Articles

Author's name (surname first followed by initials (title case)); year of publication in brackets; full stop; 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:

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

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

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

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

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

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

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

## E.2 Reference by Numbers

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

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

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

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

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

## E.3 Electronic Material

Students are advised to refer to the requirements of referencing electronic sourced material. Useful information on **Citing Electronic Resources** is available at the University of Wollongong Library website. <http://www.library.uow.edu.au/resourcesbytopic/UOW026621.html>. Additional material is available from the Learning Development Centre.

## Appendix F

### 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 the other subjects, with the setting of tutorials, continuous assessment tasks and so on, students are led step by step through the required material. In contrast, when it comes to the 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 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 G

The following is a list of relevant university websites that relate to thesis:

Code of Practice - Honours:

<http://www.uow.edu.au/about/policy/UOW058661.html>

Code of Practice - Teaching and Assessment:

<http://www.uow.edu.au/about/policy/UOW058666.html>

Code of Practice - Students:

<http://www.uow.edu.au/about/policy/UOW058664.html>

Authorship Policy:

<http://www.uow.edu.au/about/policy/UOW058654.html>

Code of Practice - Research:

<http://www.uow.edu.au/about/policy/UOW058663.html>

Acknowledgment Practice/ Plagiarism:

<http://www.uow.edu.au/about/policy/UOW058648.html>

Special Consideration Policy:

<http://www.uow.edu.au/about/policy/UOW058721.html>

Health and Safety:

<http://staff.uow.edu.au/ohs/index.html>

Risk Management and Risk Assessment Form:

<http://staff.uow.edu.au/ohs/managingrisk/riskmanagementprinciples/index.html>

Non-Discriminatory Language Practice and Presentation:

<http://www.uow.edu.au/about/policy/UOW058706>

Intellectual Property Policy:

<http://www.uow.edu.au/about/policy/UOW058689>

Research Ethics Committees and Guidelines:

<http://www.uow.edu.au/research/committees/index.html>

Turnitin:

<http://www.uow.edu.au/student/services/ld/staff/UOW022082.html>



# ENGG452 & 453

## Research Strategy

**1. Thesis Topic**

**2. Identify the major concepts/keywords from your topic.**

**3. Consider any alternative keywords or phrases** (e.g. synonyms, broader/narrower terms, alternate spelling)

**4. Develop your search strategy.** Combine keywords. Think about truncation and limits.

<b>Keyword 1</b>	<b>O R</b>	<b>Alternative keywords</b>	<b>O R</b>	<b>Alternative keywords</b>
<b>AND</b>				
<b>Keyword 2</b>	<b>O R</b>		<b>O R</b>	
<b>AND</b>				
<b>Keyword 3</b>	<b>O R</b>		<b>O R</b>	
<b>AND</b>				
<b>Limits</b>				

**5. Identify relevant databases or information sources.**

## **1. Database/Resource**\_\_\_\_\_

- Search strategy used
  
  
  
  
  
  
  
  
  
  
- Notes (e.g. most relevant search terms)

## **2. Database/Resource**\_\_\_\_\_

- Search strategy used
  
  
  
  
  
  
  
  
  
  
- Notes (e.g. Authors / Journals to follow up)

## **3. Database/Resource**\_\_\_\_\_

- Search strategy used
  
  
  
  
  
  
  
  
  
  
- Notes (e.g. searches to rerun in other databases)

**Appendix I**



**Engineering Project Form**

University of Wollongong  
Faculty of Engineering

<input type="checkbox"/> Complete	Project No. _____
<i>(Office Use)</i>	Date _____

**THE WORK IS REQUIRED FOR:**

- |   |   |
|---|---|
| <input type="checkbox"/> Civil                                    | <input type="checkbox"/> Intelligent Polymer Research Inst. (IPRI)        |
| <input type="checkbox"/> Mining                                   | <input type="checkbox"/> Institute for Steel Processing & Products (ISPP) |
| <input type="checkbox"/> Environmental                            | <input type="checkbox"/> Institute for Supercon. & Electrical Mat. (ISEM) |
| <input type="checkbox"/> Materials                                | <input type="checkbox"/> CRC Intelligent Manufacturing (CRCIM)            |
| <input type="checkbox"/> Mechanical                               | <input type="checkbox"/> CRC Welding Structures (CRCWS)                   |
| <input type="checkbox"/> Mechatronics                             | <input type="checkbox"/> Surface Engineering Research Laboratory (SEL)    |
| <input type="checkbox"/> Physics                                  | <input type="checkbox"/> Centre for Advanced Material Processing (RCAMP)  |
| <input type="checkbox"/> Centre for Medical Radiation Phys (CMRP) | <input type="checkbox"/> Eng. Innovation & Education Centre (Coniston)    |
| <input type="checkbox"/> Centre for Bulk Solids (BMH)             | <input type="checkbox"/> Centre for Engineering Mechanics (CEM)           |
| <input type="checkbox"/> Faculty                                  | <input type="checkbox"/> Mechanics of Structures Materials and Systems    |
| <input type="checkbox"/> CRC Railways                             | <input type="checkbox"/> Other _____                                      |
| <input type="checkbox"/> Sustainable Earth Research Centre (SERC) |   |

<input type="checkbox"/> Health and Behavioural Science (HBS)	<b>Important:</b> All lab equipment must be decontaminated to NHMRC standards. <input type="checkbox"/> This item does not require decontamination <input type="checkbox"/> This item has been decontaminated
<b>HBS Authorisation:</b> _____	

**DETAIL:**

- Undergrad Thesis \*
- Postgrad Thesis \*
- Consulting
- Academic Research
- Teaching Lab/Lab Classes
- Research Labs
- Maintenance

\* \_\_\_\_\_

Student No: _____
Student: _____
Supervisor: _____

**Description of Work** *(Attach Drawings)*

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**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)* \_\_\_\_\_