



SCHOOL OF CIVIL ENGINEERING

FINAL YEAR PROJECT (FYP)
EAA 492/6

2019/2020

FYP MANUAL

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Prepared by:
Course Manager

Prof. Madya Dr. Noor Faizah Fitri Md Yusof

Date :

Approved by:
Dean, School of Civil Engineering
Prof. Dr. Taksiah A.Majid

Date:

Endorsed by:
Manager (Academic)
Prof. Madya Dr. Lau Tze Liang

Date :

Archived by:
Assistant Registrar

Date :

Contents

1. Introduction.....	1
2. FYP Manual.....	1
3. FYP Coordination Committee Members.....	1
4. Course Objectives and Outcomes.....	2
5. Course Assessment.....	4
6. Deliverables.....	4
7. FYP Supervisor.....	4
8. Plagiarism and Academic Honesty.....	5
9. Teaching Plan.....	5
9.1. Teaching Plan (Semester I)	6
9.2. Teaching Plan (Semester II).....	8
10. List of Forms.....	11
11. List of Rubrics.....	11
12. Dissertation Guidelines.....	12
13. Dissertation Guidelines for References.....	12
14. FYP Submissions and Final Grading.....	12
Appendix A1: Supervisor Appointment Form.....	13
Appendix A2: Research Proposal Form.....	14
Appendix A3: Log Sheet	18
Appendix A4: Research Progress Report (Supervisor).....	20
Appendix A5: Final Draft Endorsement Form	21
Appendix A6: Sample CD Cover.....	22
Appendix A7: Complete Laboratory Work Form	23
Appendix A8: Dissertation Endorsement Form	24
Appendix B1: Proposal Presentation Rubric.....	25
Appendix B2: Final Presentation Rubric.....	27
Appendix B3: Dissertation Assessment Rubric (Supervisor).....	29
Appendix B4: Dissertation Assessment Rubric (Examiner).....	33
Appendix C: Dissertation Guidelines.....	36
Appendix D: Guidelines for References.....	45

1. Introduction

EAA492 Final Year Project (FYP) is a 6 unit core course where students conduct small research projects related to a field of interest in civil engineering. It is the students's first exposure to undertake research in a structured manner under the guidance of a supervisor.

The ultimate outcome of conducting a research is to extent the horizon of knowledge. Knowledge is light and with knowledge, quality of life is improved and mankind will not go astray. Hence, the pursuit of knowledge has been going ever since the dawn of human civilisation. For every individual, the quest for knowledge begins from the cradle to the grave. Nations that prosper are those that thrive on rich knowledge culture and expansion propelled by research.

2. FYP Manual

This FYP Manual presents a complete yet brief guide for all FYP students to undertake their research. It is likewise beneficial for all supervisors. The Manual is a compilation of guidelines that used to be uploaded piecemeal in the FYP website and consists of the following items:

- Teaching Plan
- FYP Forms
- Assessment Rubrics
- Guidelines for Preparing Dissertation
- Guidelines for References
- Dissertation Template

In future, this Manual will be further improved and enhanced based on feedbacks and comments from supervisors and students alike.

3. FYP Coordination Committee Members

At the School of Civil Engineering (PPKA), the FYP Coordination Committee administers and monitors the general progress of the course. It is a committee formed under the USM School of Civil Engineering Academic Council over a 3-year tenure. It's present membership comprises of the following individuals:

Prof. Madya Dr. Noor Faizah Fitri Md Yusof (Course Manager, CM)
Prof. Madya Ir. Dr. Choong Kok Keong
Prof. Madya Dr. Rozi Abdullah
Pn. Zalila Ariffin
Pn. Nurul Masfirah Abd Rahim

4. Course Objectives and Outcomes

In general, the course aims at exposing students to conduct research, reporting the research work in a dissertation and orally presenting the research findings. The detailed course outcomes are outline in Table 1. Supervisors must ensure that all research topics are related to Civil Engineering

Research is a continuous and never ending process since there is abundant new knowledge to unravel. Research begins with identification of the boundary of knowledge (state-of-the art) by carrying out a literature review related to the research topic . Once the boundary is established, the next stage is to extend that boundary by firstly listing down clear and measurable objectives to attain. An appropriate methodology to provide solution to the problem, will be then developed to address the objectives. Methodology can take several forms such as laboratory work, field work, questionnaires or computer simulation and modeling. Data is generated when the methodology is accomplished. The set of data needs to be analysed to produce new findings or knowledge. Where laboratory work is involved, it is desirable for the data to be analysed statistically. In FYP, the story does not end there. Students are required to report the findings by submitting a hardbound report in the form of a dissertation. In addition, students are required to orally present their work. An examination panel will be created to evaluate your performance during the presentation. Apart from that, a plagiarism checker will also be implement by using a Turinitin Software for the Final Draft of the dissertation to ensure that student commit to professional ethics and responsibilities in research while reporting.

Table 1 Course Outcome (CO) EAA492/6 Final Year Project 2018/2019

CO	COURSE OUTCOME	PO PPKA	PO USM	LT	SS	KP	CP	CA	ASSESSMENT METHOD
CO1	Able to design experiments, analysis or observation plan to fulfill objectives of the project.	PO3	PO3	C6	CTPS3	KP5	CP1 CP7	-	Report (37)
CO2	Able to conduct investigation to interpret the theory, finding and/or data with appropriate research knowledge and methods.	PO4	PO3	C6	CTPS3	KP8	CP1 CP7	-	Report (37)
CO3	Able to use laboratory techniques and/or software for data analysis and simulation.	PO5	PO2	P5	CTPS3	KP6	CP1 CP7	-	Report (37)
CO4	Able to combine in depth science or engineering analysis with examination of societal, environmental and sustainability issues related to the research topic.	PO6 PO7	PO6	A6	CPTS3 EM2	KP7	CP1 CP6	-	Report (37)
CO5	Able to perform and commit to professional ethics and responsibilities in avoiding plagiarism in the research works.	PO8	PO6	A6	EM2	KP7	-	-	Report (37)
CO6	Able to develop presentation skills needed to effectively communicate for the purpose, scope and conclusion of the research.	PO9	PO4	A4	CS3	-	-	CA5	Presentation (53)
CO7	Able to examine a range of continuous investigative options for approaching the research questions, such as experimentations, analysis, simulations and optimizations.	PO11	PO7	A4	LL2	-	-	-	Report (37)

5. Course Assessment

The course final grade is based on the components listed in Table 2.

Table 2 Course Assessment Component

Component	Contributing marks (%)	Remarks
Proposal Presentation	10%	Semester 1
Final Presentation	10%	Semester 2
Supervisor	40%	Dissertation
Examiner	30%	Dissertation
Plagiarism Check (Turnitin)	10%	Dissertation

6. Deliverables

The main deliverables from this course encompass the following submissions and presentations:

- Research proposal
- Chapters 1,2 and 3
- Final presentation
- Proposal presentation
- Final hardbound dissertation and CD
- Technical paper

In addition, there are several forms that need to be filled up and submitted. All submissions should be made to PPKA General Office.

In the past, some technical papers out of FYP work have been published in reputed journals, conference proceedings and elsewhere. There are also innovative products invented through FYP work that has been exhibited and bagged awards in the form of medals and other recognition. The committee appreciates if the supervisor concerned forward a copy of those achievements to the FYP committee through academic clerk for archiving.

7. FYP Supervisor

A student will be assigned to a main supervisor who will guide you all the way through. Under exceptional circumstances, such as where additional expertise is required to accomplish the study, a co-supervisor can be appointed and they can come from other Schools. However, only the main supervisor will grade the dissertation.

The FYP committee has devised a system to assign and distribute students to their respective supervisors of choice. Otherwise, the FYP Committee will use its discretion to assign a supervisor to students who remain unsupervised. Students progress monitoring is the responsibility of the supervisor. A survey will be carried out during the first week of Semester II to evaluate student's progress from the supervisor's standpoint.

Meeting with the supervisor is mandatory. Fill up a log sheet form each time you meet your supervisor. Each student is required to meet his/her supervisor at least 5 times during Semester

I. Students are not permitted to submit the dissertation without the supervisors endorsement. To get supervisor's endorsement, your supervisor must agree to your work.

8. Plagiarism and Academic Honesty

The FYP Committee is fully committed to upholding academic honesty and to ensure students do not plagiarise other people's work. So while writing your dissertation, do not plagiarise! Plagiarism is stealing and is an academic crime. In simple words, you plagiarise when you take other people's work and claimed it as your own. In the internet era, plagiarism is so easy and so inviting. No doubt, in research, students should refer to other researchers' work. However, if you copy and paste in your dissertation another person's work such as figures, graphs, tables, text, equations and likewise; give that person the credit through proper recognition or acknowledgements.

When you do laboratory work, report the data as it is obtained from your experiments. Do not invent, fabricate, distort or falsify the data. Your dissertation must be free from falsified, invented, fictitious data or evidence.

Supervisors are required to impress upon students under their supervision the adverse consequences of plagiarism. It is the duty of every supervisor to ensure dissertations of students under his/her supervisor are free from any plagiarised materials.

For this academic session, the plagiarism check will be implemented. Student needs to submit a softcopy of Chapter 1, 2 and 3 . The softcopy dissertation shall be submit in words document format by removing tables, figures and references. A Turnitin software will be use to check the plagiarism of the dissertation, and it will be reflecting 10% of the total distribution marks for this course. If your plagiarism percentage is more than 50%, you are required to resubmit Chapter 1,2 and 3 with correction until your plagiarism percentage is lower than 50%. You are not allowed to submit full FYP dissertation until you get the required plagiarism score.

9. Teaching Plan

In your research endeavour, the main general guide is the teaching plan. Follow through every item and activities that has been laid out in the teaching plan. The teaching plan for Semester I is final, while that of Semester II is subjected to change, but the essence remains. It is mandatory for all students to participate in all activities listed in the teaching plan. Friday is a day dedicated for FYP but that should not prevent you from meeting your supervisor on other days. On designated Friday mornings, will be FYP lectures that you must attend to enable you to grasp the fundamentals and gist of this course. Do not miss any lecture. Anyone failing to turn up for each lecture, 2 marks will be deducted from your final marks. Unless you have some justification with a letter that is certified by the Dean, Deputy Deans or medical official, you will be penalised.

9.1 Teaching Plan (Semester I)

Activities	Remarks	Action
Week 1 : 13 Sept 2019 [Friday]		
<ul style="list-style-type: none"> FYP briefing on BPK, teaching plan and implementation Identification of supervisors Fill-up Supervisor Appointment form and get supervisor consent PO Attainment 	<ul style="list-style-type: none"> BK1@ 10.00 a.m. CM to brief students on course outcome, general FYP requirements and expectations. 	CM , TDA/PA and FYP students
Week 2 : 20 Sept 2019 [Friday]		
<ul style="list-style-type: none"> Discussion with supervisor 		All FYP students
Week 3 : 27 Sept 2019 [Friday]		
<ul style="list-style-type: none"> Dateline for submission of Supervisor Appointment form Finalizing FYP Students/Supervisor 	Submission should be made to PPKA academic counter by 4:00 p.m.	All FYP students
Week 4 : 4 Oct 2019 [Friday]		
<ul style="list-style-type: none"> Lecture 1: Writing Project Proposal 09:00 – 10:30 [Assoc Prof. Dr. Lau Tze Liang] Lecture 2: Conducting Literature Review 10:30 – 12:00 [Dr. Puganeshwary Palaniandy] Lecture 3: Developing Research Methodology 15:00 – 16:30 [Dr. Fatehah Mohd Omar] 	@BK1	All FYP students
Week 5 : 11 Oct 2019 [Friday]		
<ul style="list-style-type: none"> Discussion with supervisor 		All FYP students
Week 6 : 18 Oct 2019 [Friday]		
<ul style="list-style-type: none"> Proposal Preparation and Writing 		All FYP students
Week 7 : 25 Oct 2019 [Friday]		
<ul style="list-style-type: none"> Lecture 4: Developing Questionnaire 09:00 – 10:30 [Dr. Sharifah Akmam Syed Zakaria] Lecture 5: Delivering a Good Presentation 10:30 – 12:00 [Dr. Sharifah Akmam Syed Zakaria] Lecture 6: Laboratory Safety 15:00 – 17:00 [PPKA Assistant Engineer and Safety Officer] 	@BK1	TA, safety officer and all FYP students
Week 8 Mid Semester Break (28 Oct-3 Nov 2019)		
Week 9 : 8 Nov 2019 [Friday]		
Lecture 7: Library Facilities I (Thesis template) 15:00 – 17:30 [USM Library Representative - Puan Jamilah Hassan Basri]	@ Computer Lab, PPKT	All FYP students
Week 10 : 15 Nov 2019 [Friday]		
<ul style="list-style-type: none"> Lecture 8: Library Facilities II (Database and Endnote) 15:00 – 17:30 [USM Library Representative- Pn. Mazainun Aini Mohd Zain] 	@ Computer Lab, PPKT	All FYP students

Week 11 : 22 Nov 2019 [Friday]		
Submission of: <ul style="list-style-type: none"> • Research Proposal Form (Appendix A2) • Log Sheet [A minimum of 5 meeting records during Semester I] (Appendix A3) 	Submission should be made to PPKA academic counter by 4:00 p.m.	CM, academic clerk and all FYP students
Week 12 : 27 and 29 Nov 2019 [Wednesday and Friday]		
Presentation of FYP proposal	10 % of final mark	CM, panels, academic clerk and all FYP students
Week 13 : 6 Dec 2019 [Friday]		
<ul style="list-style-type: none"> • Discussion with supervisor 		
Week 14 : 13 Dec 2019 [Friday]		
<ul style="list-style-type: none"> • Discussion with supervisor 		All FYP students
Week 15 : 20 Dec 2019 [Friday]		
<ul style="list-style-type: none"> • Discussion with supervisor 		FYP students
Week 16		
Revision Week (23rd – 29th Dec 2019)		
Week 17 – Week 19		
Examination Week (30th Dec 2019 – 19th Jan 2020)		
Week 20 – Week 24		
Inter Semester Break (20th Jan 2020 – 16th Feb 2020) Important Note: Laboratory work or any others research work is recommended to be carried out during this period		

9.2 Teaching Plan (Semester II)

Activities	Remarks	Action
Week 1 : 21 Feb 2020 [Friday]		
<ul style="list-style-type: none"> Briefing by CM on FYP Academic Plan for Semester II Research Progress Survey by Supervisor 		CM and FYP students
Week 2 : 28 Feb 2020 [Friday]		
<ul style="list-style-type: none"> Lecture 9: Statistical Analysis - Part 1 [Dr Nur Sabahiah Abdul Sukor] - TBC 	PPKT Computer Lab @ 9.00 a.m.	All FYP students
Week 3 : 6 Mar 2020 [Friday]		
<ul style="list-style-type: none"> Lecture 10: Statistical Analysis - Part 2 - TBC 	PPKT Computer Lab @ 9.00 a.m.	All FYP students
Week 4 : 13 Mar 2020 [Friday]		
<p>Submission of:</p> <ul style="list-style-type: none"> Chapter 1: Introduction Chapter 2: Literature Review Chapter 3: Research Methodology <p>for plagiarism check.</p> <p>Submission in hardcopy and softcopy.</p> <p>For softcopy, file must be in word document without figures, tables and list of references in a cd.</p>	<ul style="list-style-type: none"> Submission should be made to PPKA academic counter by 4 pm. Plagiarism check will be conducted (10% mark of the plagiarism check). For those who get >50% similarity, need to resubmit Chapter 1,2,3 with correction until similarity is less than 50%. Students are not allowed to submit full dissertation until they get similarity <50%. 	CM, academic clerk and FYP students
Week 5 : 20 Mar 2020 [Friday]		
<ul style="list-style-type: none"> Lecture 10: Preparing A Presentable Dissertation, Technical Aspects of Dissertation Formatting and Publication Ethics [Prof. Hamidi Abdul Aziz] - TBC 	PPKA/PPKT computer lab	All FYP students
Week 6 : 27 Mar 2020 [Friday]		
<ul style="list-style-type: none"> Dissertation preparation and writing for submission Resubmission of Chapter 1,2,3 (23 Mar 2020) for students who get similarity >50% 	<ul style="list-style-type: none"> Submission should be made to PPKA academic counter by 4 pm. 	All FYP students
Week 7 : 3 April 2020		
<ul style="list-style-type: none"> Dissertation preparation and writing for submission 		All FYP students
Week 8 Mid Semester Break (6 - 12 Apr 2020)		

Week 9 : 17 April 2020 [Friday]		
<ul style="list-style-type: none"> Lecture 11: Writing Technical Paper from Dissertation [Assoc. Prof. Dr. Mohd Suffian Yusoff] - TBC Dissertation preparation and writing for submission 	BK1@ 9.00 am	Supervisor and FYP students
Week 10 : 24 April 2020 [Friday] – Awal Ramadhan		
<ul style="list-style-type: none"> Submission of draft of dissertation for supervisor's revision and comments Supervisor to comment draft of dissertation for improvement 	Submission should be made to PPKA academic counter by 4 pm.	All FYP students
Week 11 : 1 May 2020 [Friday] – Labour Day		
<ul style="list-style-type: none"> Supervisors to return commented draft to FYP students via PPKA academic counter 	Submission by supervisors should be made to PPKA academic counter by 4 p.m. on or before 30 April 2020.	All supervisors and FYP students
Week 12 : 8 May 2020 [Monday] - 7 May – Wesak Day		
<ul style="list-style-type: none"> Discussion with supervisor on commented draft dissertation 		All supervisors and FYP students
Week 13 : 15 May 2020 [Friday]		
<p>Submission of:</p> <ul style="list-style-type: none"> 2 copies of final draft of FYP dissertations [softbound] complete with supervisor endorsement form (Appendix A5) Log sheet [min 5 meeting records] (Appendix A3) Complete Laboratory Work Form (if relevant) (Appendix A7) <p>Distributing FYP dissertations to appointed examiners</p>	<ul style="list-style-type: none"> Submission should be made to PPKA academic counter by 4 p.m. Examiners/supervisors to assess, make recommendations for improvement and to give mark 	CM, examiners, academic clerk and supervisors
Week 14: 20 May 2020 [Wednesday]		
<ul style="list-style-type: none"> Lecture 12: Postgraduate Education Opportunities at USM [Assoc. Prof Dr Nastaein Qamaruz Zaman] - TBC 	2.30 p.m. @ BK1	All FYP students
Week 15: 29 May 2020 [Friday] (25 – 26 May – Hari Raya Aidilfitri)		
<ul style="list-style-type: none"> Discussion with supervisor and preparation for final presentation 		All FYP students
Week 16 : 1-7 June 2020 [Revision Week]		
2– 3 June 2020– (Tuesday - Wednesday) Final Presentation	Panels [supervisor and at least 3 examiners]	CM, examiners, academic clerk and supervisors
<p style="text-align: center;">Important Note:</p> <ol style="list-style-type: none"> On 5th June, examiners and supervisor submit dissertation evaluation rubrics to academic clerk. FYP students to carry out the necessary corrections as recommended by supervisor and examiner. Dissertations should be collected from PPKA academic counter after all corrections have been carried out. Endorsement of examiner and supervisor should be obtained 		
Week 17 – Week 19		
Examination Week (8 Jun – 28 Jun 2020)		

Week 20 : 29 June 2020 [Monday]		
<p>Submission of:</p> <ul style="list-style-type: none"> • 3 Hard Bound Copies of Dissertation Complete (1-School (cumpulsary), 1-Supervisor (option), 1-student (option)) with Correction Endorsement Form (Appendix A8) • 3 CDs [2 In Pdf Format to PPKA and 1 In Word Format to Supervisor Including Complete Dissertation, Appendices, Raw Data, Technical Paper, Power Point, Etc.] • 1 Technical Paper • Resume 	<ul style="list-style-type: none"> • Students to submit to PPKA academic counter by 4 p.m. and to be stamped as proof of submission. 	<ul style="list-style-type: none"> • CM and FYP committee to analyse and moderate marks • Marks will be tabulated In PPKA exam board meeting Semester II Academic Session 2019/2020

10. List of Forms

Table 3 lists down all forms that you have to fill up from time to time. The sequence of forms to be filled up can be traced from the teaching plan. There is a log sheet that you have to fill up every time you meet your supervisor, at least 5 times during Semester I. Apart from hardbound copies, you are also required to submit your dissertation in softcopy. The CD for the supervisor should contain among others, the technical paper and raw data from your work to facilitate publication of your work in journals or conference proceedings.

Table 3 FYP Forms

Item	FYP Form/Other	Appendix
1.	Supervisor Appointment	A1
2.	Research Proposal Form	A2
3.	Log Sheet	A3
4.	Research Progress Report (Supervisor)	A4
5.	Final Draft Endorsement	A5
7.	Sample CD Cover	A6
8.	Complete Laboratory Work Form	A7
9.	Dissertation Endorsement	A8

11. List of Rubrics

Assessment of your presentations and dissertation will be made using pre-designed rubrics. Do glance through all four assessment rubrics. The rubrics exhibit all items that will be used to evaluate your performance and hence determining your ultimate score.

Table 4 FYP Rubrics (to be revised)

Item	Rubrics	Appendix
1.	Proposal Presentation	B1
2.	Final Presentation	B2
3.	Dissertation Assessment (Supervisor)	B3
4.	Dissertation Assessment Rubric (Examiner)	B4

12. Dissertation Guidelines

For a dissertation to qualify for an A grade, it must meet not only academic quality standards but the dissertation must be presentable. Appendix C shows detailed guidelines for preparation of presentable dissertation report that you must adhere to strictly. A ready-made dissertation template is also prepared for you to conveniently adopt and adapt to your needs but keeping the format intact.

13. Dissertation Guidelines for References

Materials for your dissertation can be sourced out from many references. To avoid plagiarism, a referencing system must be made to the original source that you cite in the text. Various referencing systems are available. The FYP Committee agreed to adopt the Harvard Citation Style. A detailed guide is elaborated in Appendix D. Students must strictly follow this guide. Failure to conform to this referencing style can be a factor for the FYP Moderation Committee to downgrade your final marks for this course.

There are many reference sources. At FYP level, students should give preference to journals, conference proceedings, research reports, theses and less reliance on books or magazines. Do not cite Wikipedia as a reference source. Wikipedia can be used for a general overview and understanding of a subject matter.

14. FYP Submissions and Final Grading

The four FYP course assessment components was highlighted in Table 2. Other than the two presentations, students are to submit the followings:

- Chapters 1, 2 and 3 (hardcopy and softcopy)
- First draft dissertation
- Final draft dissertation
- Final FYP dissertation

Chapters 1, 2 and 3 will be submitted during the fourth week of the second semester and will be graded for plagiarism. This part of the dissertation should have been completed just in time for students to submit the first draft of the dissertation.

The first draft dissertation is meant only for the supervisor and will not be graded. Supervisors are required to edit and register thorough and detailed comments before returning them to their respective students for further improvement. Students are required to address upon every comments made that eventually culminates into the final draft dissertation.

The final draft dissertation is perhaps the most important document from the grading point of view. This version of the dissertation will be distributed to the supervisor and internal examiner for grading. In this version of the dissertation, extensive and elaborate comments by the supervisor and examiner are not expected since marks have been given or the dissertation has been graded. Nevertheless, students are still required to incorporate all comments made by both examiners and then submit the final hardbound copies of the FYP dissertation, upon endorsement by both supervisor and internal examiner. No final grade will be given in case of failure to submit the final FYP dissertation.



**SCHOOL OF CIVIL ENGINEERING
ACADEMIC SESSION 2019/2020**

**FINAL YEAR PROJECT EAA492/6
SUPERVISOR APPOINTMENT FORM**

I hereby agree to serve as supervisor to the student whose particulars are as follows:

Name of Student :

Matric No :

Identity Card No. :

Email Address :

Handphone No :

Proposed Project (*Please write down the proposed topic or title, if any*):

(Signature of Supervisor)

Name:

Date:

Notes:

1. A student must choose and seek the endorsement of only **ONE (1)** supervisor.
2. Students are required to submit the completed form to the Academic Counter on **27 September 2019 before 4:00 pm**



**SCHOOL OF CIVIL ENGINEERING
ACADEMIC SESSION 2019/2020**

**FINAL YEAR PROJECT EAA492/6
RESEARCH PROPOSAL FORM
(To be submitted by 22 November 2019)**

A	Name of Student : Identify Card No: Matric No:
B	Project Area:
C	Title of Proposed Research Project:
D	Type of Proposed Research Project (Experimental/Questionnaire/Modeling/Case Study):
E	Name of Supervisor:
F	Name of Co-Supervisor (if any):
G	<div style="display: flex; justify-content: space-between;"> <div>Date :</div> <div>Student's Signature :</div> </div>

I	<p>The Importance and Benefits of the Proposed Research Project</p> <p>Explain the objectives and the potential benefits of the proposed project to the field of Civil Engineering (not more than 50 words)</p>
J	<p>Major Equipment and Materials to be Used in the Proposed Research Project</p> <p>Highlight those that are available in the School and those that require outsourcing/purchasing; The student and the supervisor should be responsible for the use of equipment/materials that are not available in the School</p>

K	Supervisor's Comments and Endorsement
	<p>I hereby verify that the proposed project is deemed appropriate as a Final Year Project and should be able to be completed within the stipulated duration.</p> <p>.....</p> <p>Endorsement of Research Project Supervisor</p> <p>Date :</p>



**SCHOOL OF CIVIL ENGINEERING
ACADEMIC SESSION 2019/2020**

**FINAL YEAR PROJECT EAA492/6
LOG SHEET**

Name of Student : Identify Card No : Matric No :	
Specialised Project Area :	
Title of Project :	
Name of Supervisor :	
Date :	Supervisor's Signature :
Date :	Student's Signature :
<p align="center">Notes on use of the project log sheet</p> <ol style="list-style-type: none"> 1. The student and supervisor must arrange regular supervisory meetings to review progress and make plans for the project. It is the purpose of the Project Log sheet to document these meetings and therefore build up a record of the student's progress throughout the project; 2. The student should prepare for the supervisory meeting by deciding which questions he or she needs to ask the supervisor and what progress has been made since the last meeting (if applicable) and noting these in the relevant sections of the sheet, effectively forming an agenda for the meeting; 3. The business of the meeting should be noted briefly as items in the relevant section of the sheet. There will be one sheet for each supervisory meeting and the actions on the student (and perhaps the supervisor) which should be carried out before the next meeting should be noted briefly in the relevant section of the sheet; 4. The Project Log sheet is one of the deliverables from the project and is an important record of the student's organisation and learning experience. The student should ensure that it is handed in as an appendix of the report, with sheets dated and numbered consecutively to show a consistent record of the supervisory meetings; 	

Circle Week Number

1	2	3	4	5	6	7	8	9	10	11	12
13	14	15	16	17	18	19	20	21	22	23	24

Items for discussion (noted by student before supervisory meeting):

- 1.
- 2.
- 3.
- 4.
- 5.

Record of discussion of supervisory meeting:

- 1.
- 2.
- 3.
- 4.
- 5.

Action list (to be attempted or completed by student by the next supervisory meeting):

- 1.
- 2.
- 3.
- 4.
- 5.



**SCHOOL OF CIVIL ENGINEERING
ACADEMIC SESSION 2019/2020**

**FINAL YEAR PROJECT EAA492/6
RESEARCH PROGRESS REPORT (SUPERVISOR)
(To be submitted by **27 February 2020**)**

(To Be Filled Up by the Main Supervisor for Every Student Supervised)

Name of Student :

Dissertation Title :

Current Stage of Study: (Tick [✓] or fill up the relevant boxes)

Just Started/Literature Search	
Writing Proposal	
Data Collection/Field Work (Indicate how many % completed)	
Data Analysis (Indicate how many % completed)	
Writing/Completing 1 st Draft (Indicate how many chapters completed)	

Frequency of Attendance/Consultation: (Tick [✓] the relevant box)

Very Frequent/Regular	
Frequent/Regular	
Satisfactory	
Not Regular	

Overall Progress: (Tick [✓] the relevant box)

Excellent	
Good	
Satisfactory	
Unsatisfactory	
Poor	

Name and Signature of Supervisor:

Date:



**SCHOOL OF CIVIL ENGINEERING
ACADEMIC SESSION 2019/2020**

**FINAL YEAR PROJECT EAA492/6
FINAL DRAFT ENDORSEMENT FORM**

Title :

I, _____ hereby

declare that I have checked and revised the whole draft of dissertation as required by my supervisor.

Student's Signature:

Supervisor's Signature:

Date:

Name of Supervisor:

Date:

**SHOULD BE STAMPED BY THE GENERAL OFFICE OF THE SCHOOL OF
CIVIL ENGINEERING, UNIVERSITI SAINS MALAYSIA**



**SCHOOL OF CIVIL ENGINEERING
ACADEMIC SESSION 2019/2020**

**FINAL YEAR PROJECT EAA492/6
SAMPLE CD COVER**



**SCHOOL OF CIVIL ENGINEERING
ACADEMIC SESSION 2018/2019**



Supervisor:
Dr. Fadzli Mohamed Nazri

**STATE OF THE PRACTICE OF
SEISMIC HAZARD EVALUATION**

Prepared by:
Adzli bin Azri
65267



**SCHOOL OF CIVIL ENGINEERING
ACADEMIC SESSION 2019/2020**

**FINAL YEAR PROJECT EAA492/6
COMPLETE LABORATORY WORK FORM**

Name of Laboratory:

Matric No:

Name of Student:

Name of Supervisor:

Title of Project:

Date of Commencement of Project:

Date of Completion of Project:

Please tick [✓] in the appropriate box and briefly write on the appropriate space.

1. Clean and tidy working space ☐
2. Good condition of machinery/equipment ☐
3. Equipment/chemical material/laboratory facilities have been returned ☐
4. Others please specify:

Student's Comments/Suggestions to improve all aspects of laboratory quality:

Student's Declaration

I certify that the above declaration is true

(.....)

Signature/Name/Date

**Certification by Workshop Supervisor
/Laboratory/Lecture Room**

I have checked the laboratory and hereby affirm
that the student's declaration is true

(.....)

Signature/Name and Stamp/Date



**SCHOOL OF CIVIL ENGINEERING
ACADEMIC SESSION 2019/2020**

**FINAL YEAR PROJECT EAA492/6
DISSERTATION ENDORSEMENT FORM**

Title:

Name of Student:

I hereby declare that all corrections and comments made by the supervisor(s) and examiner have been taken into consideration and rectified accordingly.

Signature:

Approved by:

(Signature of Supervisor)

Date :

Name of Supervisor :


Date :

Approved by:

(Signature of Examiner)

Name of Examiner :


Date :

 UNIVERSITI SAINS MALAYSIA School of Civil Engineering Academic Session 2019/2020	FINAL YEAR PROJECT EAA492/6					
	PROPOSAL PRESENTATION RUBRIC					
	Title of Project :					
	Name of Student :					Matric No :
COMPONENTS	MARKS					TOTAL
	1-2	3-4	5-6	7-8	9-10	
CO6: Able to develop presentation skills needed to effectively communicate for the purpose, scope, findings and conclusion of the research (PO9)						
Content (20%) (PO9)	Unable to present the content of the research	Able to present the content of the research but in unsystematic manner	Able to present some of the content of the research in systematic manner.	Able to present most of the content of research in systematic manner.	Able to clearly present all content of the research in organized and systematic manner.	
Organization (10%) (PO9)	Presentation is unfocused with main theme and supporting details presented in the disorganized and unrelated way.	Presentation is with minimal focused with main theme and supporting details presented in the organized and related way	Presentation demonstrates some grasp of organization with a discernible theme and supporting details.	Presentation demonstrates good grasp of organization with a discernible theme and supporting details.	Presentation is clearly organized. Each segment relates to the others to a carefully planned framework	
Communication Skills (20%) (PO9)	Able to express but lack of fluency.	Able to express with minimum fluency.	Able to express clearly, fluently and quite convincing.	Able to express clearly, fluently and convincingly.	Able to express very clearly, fluently and convincingly.	
Presentation Skill (20%) (PO9)	Presentation with absence of confidence	Presentation with minimum confidence.	Moderate presentation with some confidence.	Good presentation with high confidence.	Excellent presentation with high confidence.	
Discussion Q & A (30%) (PO9)	Unable to respond and answer.	Able to respond and answer with minimum relevancy and confidence.	Able to respond and answer clearly with some relevancy and confidence.	Able to respond and answer clearly with significant relevancy and confidence.	Able to respond and answer excellently with high relevancy (with justification) and highly confidence,	
TOTAL (100%)						

EXAMINER : _____ SIGNATURE AND DATE _____

Comments/Recommendations :


Please write down your comments/recommendations (if necessary)

 UNIVERSITI SAINS MALAYSIA School of Civil Engineering Academic Session 2019/20	FINAL YEAR PROJECT EAA492/6 FINAL PRESENTATION RUBRIC					
	Title of Project :					
	Name of Student :				Matric No :	
COMPONENTS	MARKS					TOTAL
	1-2	3-4	5-6	7-8	9-10	
CO6: Able to develop presentation skills needed to effectively communicate for the purpose, scope, findings and conclusion of the research (PO9)						
Content (20%) (PO9)	Unable to present the content of the research	Able to present the content of the research but in unsystematic manner	Able to present some of the content of the research in systematic manner.	Able to present most of the content of research in systematic manner.	Able to clearly present all content of the research in organized and systematic manner.	
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Communication Skills (20%) (PO9)	Able to express but lack of fluency.	Able to express with minimum fluency.	Able to express clearly, fluently and quite convincing.	Able to express clearly, fluently and convincingly.	Able to express very clearly, fluently and convincingly.	
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TOTAL (100%)						

EXAMINER : _____ SIGNATURE AND DATE _____

Comments/Recommendations :


Please write down your comments/recommendations (if necessary)

 <p>School of Civil Engineering Academic Session 2019/2020</p>	FINAL YEAR PROJECT EAA492/6 DISSERTATION ASSESSMENT RUBRIC - SUPERVISOR					
	Title of Project :					
	Name of Student :					Matric No :
COMPONENTS	MARKS					TOTAL
	1-2	3-4	5-6	7-8	9-10	
CO1: Able to design experiments, analysis or observation plan to fulfill the objectives of the project. (PO3)						
Problem Statement (5%) (PO3)	Unable to identify all the three elements which are: 1.What is the current situation (brief literature review of similar works)? 2.What is wrong with the current situation (issues/problems regard to similar area of study)? 3.What needs more to be done?	Able to identify one of the elements however, it is inconsistent with the title. Not able to identify issues/problems.	Able to identify two of the elements that are consistent with the title. There is evidence of issues/problems highlighted but indirectly related to the intended study.	Able to establish three elements consistent with the title. Able to identify issues/problems directly related to the intended study. Able to establish the shortcomings with brief proposal of suitable measures.	Able to formulate the three elements that are consistent with the title. Able to identify issues/problems directly related to the intended study. Able to establish the shortcoming with some justifications and brief proposals of suitable measures are also included.	
Project Objectives (5%) (PO3)	Unable to identify objectives	Able to identify the objectives of the study. However, objectives are non-SMART (Specific, Measurable, Achievable, Realistic and Timeliness) with incorrect usage of verbs	Able to identify the objectives of the study which are SMART with correct usage of verbs.	Able to determine at least two numbers of objectives in line with problem statements. Objectives are SMART with correct usage of verbs.	Able to establish at least two numbers of objectives that are SMART with correct usage of verbs consistent with problem statement and scope of work	
CO7: Able to examine a range of continuous investigative options for approaching the research questions, such as experimentations, analysis, simulations and optimizations (PO11)						
Literature Review (15%) (PO11)	Unable to identify relevant themes to review	Able to make a review but it is summary of general literature related to the topic. Write-up consists of merely a copy and paste job, rewritten facts and full of annotations.	Able to make a review with little analysis on the previous research and with limited coverage of related theories/concept and studies on the subject area. Improper citations are evident. Materials organized according to chronology	Able to establish substantial coverage of related theories/ concept and studies on the subject area. Proper citations (include figures and tables taken from various sources). Materials organized according to theme.	Able to adapt related theories/concept and studies on the subject area. Able to integrate the previous findings and conclude the uniqueness of the present work. Proper citations (include figures and tables taken from various sources). There is some evidence of good organization. Provide some form of	

			and not according to theme.	There is some evidence of good organization.	justifications on why research should proceed.	
CO2: Able to conduct investigation to interpret the theory, finding and/or data with appropriate research knowledge and methods (PO4)						
Methodological Framework (10%) (PO4)	Methodological Framework outlined is not consistent with objectives. No evidence of data collecting planning programme.	Methodological Framework outlined is consistent with objectives but do not follow the standard method of measurements. Some evidence of data collection planning programme is given.	Methodological Framework outlined is consistent with objectives but adopt the standard method of measurements (even if it is not a standard method of measurement, proper citation is required). Some evidence data collection planning programme is given.	Methodological Framework outlined is consistent with objectives but adopt the standard method of measurements (even if it is not a standard method of measurement, proper justifications and citations are required). Some evidence data collection planning programme is given.	Methodological Framework outlined is consistent with objectives but adopt the standard method of measurements (even if it is not a standard method of measurement, proper citation is required). Comprehensive evidence data collection planning programme is given.	
CO3: Able to use laboratory techniques and/or software for data analysis and simulation (PO5)						
Proposed Tools/ Techniques (10%) (PO5)	Able to identify some tools/ techniques but irrelevant with objectives.	Able to identify some tools/ techniques that relevant with objectives.	Able to highlight specific tools/ techniques (with no justifications) that are relevant to objectives.	Able to highlight specific tools/ techniques (with justifications) that are relevant to objectives.	Able to explain in detail the specific tools/ techniques (with justifications) and comparisons with other tools) that are relevant to objectives. The proposed tools are supported with previous studies/ theory.	
CO1: Able to design experiments, analysis or observation plan to fulfill the objectives of the project (PO3)						
Results & Analysis (10%) (PO3)	Unable to compile and present the present and results either in table or graph forms.	Some results are shown but not substantiated with analysis. Tabulation of results in tables and figures with no explanations.	Results substantiated with analysis. Tabulation of results in tables and figures and some explanations.	Results substantiated with analysis. Tabulation of results in tables and figures and some explanations on the trends or behavior of the variables/ parameters are presented.	Results substantiated with variety types of analysis. Tabulation of results in tables and figures and detail explanations on the trends or behaviors of the variables/ parameters are presented.	
Discussion (15%) (PO3)	Unable to discuss the results	Able to discuss but limited to current findings. Not able to explain the strength and weakness of the results.	Able to explain the strength and weakness of the results in line with the objectives of the study. No comparisons with other study.	Able to explain the strength and weakness of the results in line with the objectives of the study and compare the results with previous study or standard.	Able to explain the strength and weakness, justify the main results, compare and criticise results with previous studies/literature to satisfy and support the objectives of the study.	

Conclusion & Recommendations (5%) (PO3)	Unable to identify conclusions and provide any recommendations.	Able to identify conclusions but inconsistent with objectives. Irrelevant recommendations.	Able to state conclusions and recommendations that are consistent with objectives.	Able to outline conclusions consistent with objectives. Appropriate recommendations included based on the findings.	Able to outline conclusions which are consistent with objectives. Comprehensive recommendations (with justifications) included based on the findings.	
CO7: Able to examine a range of continuous investigative options for approaching the research questions, such as experimentations, analysis, simulations and optimizations (PO11)						
References (5%) (PO11)	Relevant references are merely from website	Relevant references include articles from website, books, newspaper and magazines.	Relevant references include articles from website, books, newspaper, magazines and 7 to 8 from non-referred/ referred proceedings of conferences and 1 or 2 from refereed journals in related domain.	Relevant references more than 8 from non-referred/ referred proceedings of conferences and 3 to 4 from referred journals in related domain.	Relevant references more than 8 from non-referred/ referred proceedings of conferences and more than 5 from referred journals in related domain.	
Writing Skills (10%) (PO11)	Poor in writing skill with substantial grammatical errors. Information conveyed cannot be understood.	Average writing skill with grammatical errors. Information conveyed can be fairly understood.	Average writing skill with little grammatical errors. Information conveyed can be fairly understood.	Good writing skill with correct grammar usage. Information conveyed can be understood.	Good narrative structure with excellent writing skill. Information conveyed can be well understood.	
CO4: Able to combine in depth science or engineering analysis with assessment of societal, environmental and sustainability issues related to the research topic (PO6 & PO7)						
Project Benefits to Civil Engineering (5%) (PO6)	Unable to identify who will benefit the study.	Able to identify the parties that will benefit the study	Able to explain some of the parties that can benefit the study	Able to outline and justify some of the parties that can benefit the study	Able to outline and justify the parties that can benefit the study	
Engagement in Sustainable Design/Issue/Tools (5%) (PO7)	Unable to engage in evaluation of sustainable effects of engineering project.	Able to engage in evaluation of sustainable effects of engineering project.	Sound understanding of sustainability effects. Mostly effective evaluation of engineering project impact to improve results.	Good understanding of sustainability effects. Effective evaluation of engineering project impact to improve results.	Good understanding of sustainability effects. Effective assessment of engineering project impact support and explain results.	
TOTAL (100%)						

CO2: Able to conduct investigation to interpret the theory, finding and/or data with appropriate research knowledge and methods (PO4)						
Initiative and Effort (10%) (PO4)	Student has no initiative and effort to complete the given tasks.	Student has less initiative and effort to complete the given tasks.	Student has adequate initiative and effort to complete the given tasks	Student has a good initiative to complete the given tasks and demonstrated effort to explore ideas outside the proposed idea by supervisor.	Student has an excellent initiative to complete the given tasks, with extra ideas exploration, two-way discussion and exchange of information.	
Application of Knowledge (10%) (PO4)	Poor standards in the acquisition and application of knowledge, skills and ability.	Minimal standards in the acquisition and application of knowledge, skills and ability.	Adequate standards in the acquisition and application of knowledge, skills and ability.	High standards in the acquisition and application of knowledge, skills and ability.	Excellent and outstanding standards in the acquisition and application of knowledge, skills and ability.	
Thinking Ability (10%) (PO4)	Poor level of creative and analytical thinking.	Minimal level of creative and analytical thinking	Adequate level of creative and analytical thinking.	Good level of creative and analytical thinking.	Excellent level of creative and analytical thinking.	
Creative & Initiative (10%) (PO4)	Unable to express problems.	Able to express problem without solution.	Able to discuss problems with some solutions after guidance given	Able to discuss problems with practical solutions after minimum guidance given.	Able to discuss problems and suggest total and practical solutions without guidance given.	
TOTAL (40%)						
	<p>SUPERVISOR : _____ SIGNATURE AND DATE : _____</p> <p>Comments/Recommendations : <i>Please write down your comments/recommendations (if necessary)</i></p>					

 UNIVERSITI SAINS MALAYSIA School of Civil Engineering Academic Session 2019/20	FINAL YEAR PROJECT EAA492/6 DISSERTATION ASSESSMENT RUBRIC - EXAMINER					
	Title of Project :					
	Name of Student :				Matric No :	
COMPONENTS	MARKS					TOTAL
	1-2	3-4	5-6	7-8	9-10	
CO1: Able to design experiments, analysis or observation plan to fulfill the objectives of the project (PO3)						
Problem Statement (5%) (PO3)	Unable to identify all the three elements which are: 4.What is the current situation (brief literature review of similar works)? 5.What is wrong with the current situation (issues/problems regard to similar area of study)? 6.What needs more to be done?	Able to identify one of the elements however, it is inconsistent with the title. Not able to identify issues/problems.	Able to identify two of the elements that are consistent with the title. There is evidence of issues/problems highlighted but indirectly related to the intended study.	Able to establish three elements consistent with the title. Able to identify issues/problems directly related to the intended study. Able to established the shortcomings with brief proposal of suitable measures.	Able to formulate the three elements that are consistent with the title. Able to identify issues/problems directly related to the intended study. Able to establish the shortcoming with some justifications and brief proposals of suitable measures are also included.	
Project Objectives (5%) (PO3)	Unable to identify objectives	Able to identify the objectives of the study. However, objectives are non-SMART (Spesific, Measurable, Achievable, Realistic and Timeliness) with incorrect usage of verbs	Able to identify the objectives of the study which are SMART with correct usage of verbs.	Able to determine at least two numbers of objectives in line with problem statements. Objectives are SMART with correct usage of verbs.	Able to establish at least two numbers of objectives that are SMART with correct usage of verbs consistent with problem statement and scope of work	
CO7: Able to examine a range of continuous investigative options for approaching the research questions, such as experimentations, analysis, simulations and optimizations (PO11)						
Literature Review (15%) (PO11)	Unable to identify relevant themes to review	Able to make a review but it is summary of general literature related to the topic. Write-up consists of merely a copy and paste job, rewritten facts and full of annotations.	Able to make a review with little analysis on the previous research and with limited coverage of related theories/concept and studies on the subject area. Improper citations are evident. Materials organized according to chronology and not according to theme.	Able to establish substantial coverage of related theories/ concept and studies on the subject area. Proper citations (include figures and tables taken from various sources). Materials organized according to theme. There is some evidence of good organization.	Able to adapt related theories/concept and studies on the subject area. Able to integrate the previous findings and conclude the uniqueness of the present work. Proper citations (include figures and tables taken from various sources). There is some evidence of good organization. Provide some form of justifications on why research should proceed.	

CO2: Able to conduct investigation to interpret the theory, finding and/or data with appropriate research knowledge and methods (PO4)						
Methodological Framework (10%) (PO4)	Methodological Framework outlined is not consistent with objectives. No evidence of data collecting planning programme.	Methodological Framework outlined is consistent with objectives but do not follow the standard method of measurements. Some evidence of data collection planning programme is given.	Methodological Framework outlined is consistent with objectives but adopt the standard method of measurements (even if it is not a standard method of measurement, proper citation is required). Some evidence data collection planning programme is given.	Methodological Framework outlined is consistent with objectives but adopt the standard method of measurements (even if it is not a standard method of measurement, proper justifications and citations are required). Some evidence data collection planning programme is given.	Methodological Framework outlined is consistent with objectives but adopt the standard method of measurements (even if it is not a standard method of measurement, proper citation is required). Comprehensive evidence data collection planning programme is given.	
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CO1: Able to design experiments, analysis or observation plan to fulfill the objectives of the project (PO3)						
Results & Analysis (10%) (PO3)	Unable to compile and present the present and results either in table or graph forms.	Some results are shown but not substantiated with analysis. Tabulation of results in tables and figures with no explanations.	Results substantiated with analysis. Tabulation of results in tables and figures and some explanations.	Results substantiated with analysis. Tabulation of results in tables and figures and some explanations on the trends or behavior of the variables/ parameters are presented.	Results substantiated with variety types of analysis. Tabulation of results in tables and figures and detail explanations on the trends or behaviors of the variables/ parameters are presented.	
Discussion (15%) (PO3)	Unable to discuss the results	Able to discuss but limited to current findings. Not able to explain the strength and weakness of the results.	Able to explain the strength and weakness of the results in line with the objectives of the study. No comparisons with other study.	Able to explain the strength and weakness of the results in line with the objectives of the study and compare the results with previous study or standard.	Able to explain the strength and weakness, justify the main results, compare and criticise results with previous studies/literature to satisfy and support the objectives of the study.	
Conclusion & Recommendations (5%) (PO3)	Unable to identify conclusions and provide any recommendations.	Able to identify conclusions but inconsistent with objectives. Irrelevant recommendations.	Able to state conclusions and recommendations that are consistent with objectives.	Able to outline conclusions consistent with objectives. Appropriate recommendations included based on the findings.	Able to outlined conclusions which are consistent with objectives. Comprehensive recommendations (with justifications) included based on the findings.	

CO7: Able to examine a range of continuous investigative options for approaching the research questions, such as experimentations, analysis, simulations and optimizations (PO11)						
References (5%) (PO11)	Relevant references are merely from website	Relevant references include articles from website, books, newspaper and magazines.	Relevant references include articles from website, books, newspaper, magazines and 7 to 8 from non-referred/ referred proceedings of conferences and 1 or 2 from refereed journals in related domain.	Relevant references more than 8 from non-referred/ referred proceedings of conferences and 3 to 4 from referred journals in related domain.	Relevant references more than 8 from non-referred/ referred proceedings of conferences and more than 5 from referred journals in related domain.	
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Project Benefits to Civil Engineering (5%) (PO6)	Unable to identify who will benefit the study.	Able to identify the parties that will benefit the study	Able to explain some of the parties that can benefit the study	Able to outline and justify some of the parties that can benefit the study	Able to outline and justify the parties that can benefit the study	
Engagement in Sustainable Design/Issue/Tools (5%) (PO7)	Unable to engage in evaluation of sustainable effects of engineering project.	Able to engage in evaluation of sustainable effects of engineering project.	Sound understanding of sustainability effects. Mostly effective evaluation of engineering project impact to improve results.	Good understanding of sustainability effects. Effective evaluation of engineering project impact to improve results.	Good understanding of sustainability effects. Effective assessment of engineering project impact support and explain results.	
TOTAL (100%)						
EXAMINER : _____ SIGNATURE AND DATE : _____ Comments/Recommendations : <i>Please write down your comments/recommendations (if necessary)</i>						



**SCHOOL OF CIVIL ENGINEERING
ACADEMIC SESSION 2019/2020**

**FINAL YEAR PROJECT EAA492/6
DISSERTATION GUIDELINES**

C1. Introduction

Submission of a Final Year Project dissertation by every student registering for EAA492/6 course is mandatory. Preparation and presentation of the dissertation must comply with the guidelines provided. Dissertations that do not conform with those guidelines will **NOT BE ACCEPTED**.

The final draft dissertation must be endorsed by the supervisor prior to binding. All students must submit the final draft within a period stipulated in the teaching plan. The dissertation endorsement forms (see Appendices A5 and A6) must be filled up and signed as proofs that all supervisory works and corrections have been undertaken.

Students are required to bear all costs related to all dissertation preparation.

The dissertation can be written either in **Bahasa Melayu** or **English**. However, all oral presentations must be delivered in **English**.

The minimum number of written pages in a dissertation is 50, excluding figures, tables and appendix. In any circumstances, a dissertation should not exceed 100 pages.

The “FYP Dissertation Template” can be downloaded from a PPKA website dedicated to FYP matters. Nevertheless, this template only outlines what constitutes a presentable FYP dissertation.

C2. Dissertation Preparation

C2.1 Typing

Presentation of the dissertation report must comply to the following guidelines:

- i. The main text must be typed in **DOUBLE SPACING**; exceptions are quotations as paragraph, captions, lists, graphs, charts, footnotes, items within tables, lists in appendices and list of references.
- ii. Print the dissertation on only **ONE SIDE** of the paper. Type using Microsoft word format in font type **TIMES NEW ROMAN** and **FONT SIZE 12**. Smaller font size can be used for footnotes (if applicable) or other material outside of the main text, such as in large tables or the Appendix section.
- iii. Print dissertation using laser quality printer. Similar good quality photocopy is also expected.
- iv. Use black text throughout, though some parts such as figures or pictures can be in colour.

C2.2 Paper

Print all copies on good quality 80 gm plain white A4 size paper.

C2.3 Margin

The top, right and bottom margins are 2.5 cm; while the left margin is 3.6 cm.

C3. Dissertation Components

The dissertation should be arranged in the following sequence:

- Cover Page (Hardbound Cover)
- Title Page (Soft Cover)
- Final Dissertation Endorsement Form
- Acknowledgements
- Abstrak (Bahasa Melayu)
- Abstract (English)
- Table of Contents
- List of Figures
- List of Tables
- List of Abbreviations (if applicable)
- List of Symbols (if applicable)
- Main Body of Dissertation (suggested chapters outline)
 - Chapter 1 Introduction
 - Chapter 2 Literature Review
 - Chapter 3 Methodology
 - Chapter 4 Results and Discussion
 - Chapter 5 Conclusions and Recommendations
- References
- Appendix or Appendices (if applicable)

Each component has its own formatting guidelines and shall be deliberated in the forthcoming sections.

C4. Dissertation Format

C4.1 Cover Page (Hardbound Cover)

Use **BUCKRAM** type cover with lettering in **GOLDEN INK**. Use **TIMES NEW ROMAN** with font size **18** and all in uppercase. The cover colour is **EMERALD GREEN** and colour code **2631**. Instruct the vendor to use this colour code when binding your dissertation.

The layout of the hardbound Cover Page is shown in Figure C1. The cover must clearly exhibit the project title, student's full name, School and University names and year of submission.

C4.1.1 Spine Page (Hardbound Cover)

Spine cover should exhibit the student's name and the year of submission typed in **TIMES NEW ROMAN** font size **18** and **ALL IN UPPERCASE** in golden colour typeface. An example is given in Figure C2.

C4.2 Title Page (Soft Cover)

Refer to Figure C3 for format of the Title Page (Soft Cover). The cover must display the project title, candidate's full name, honorary degree with respect to the project and a statement for submission of the dissertation.

C4.3 Final Dissertation Endorsement Form

The endorsement form can be retrieved from Appendix A6. This form must be endorsed by your supervisor and the internal examiner **BEFORE** you send your final dissertation to the vendor for binding.

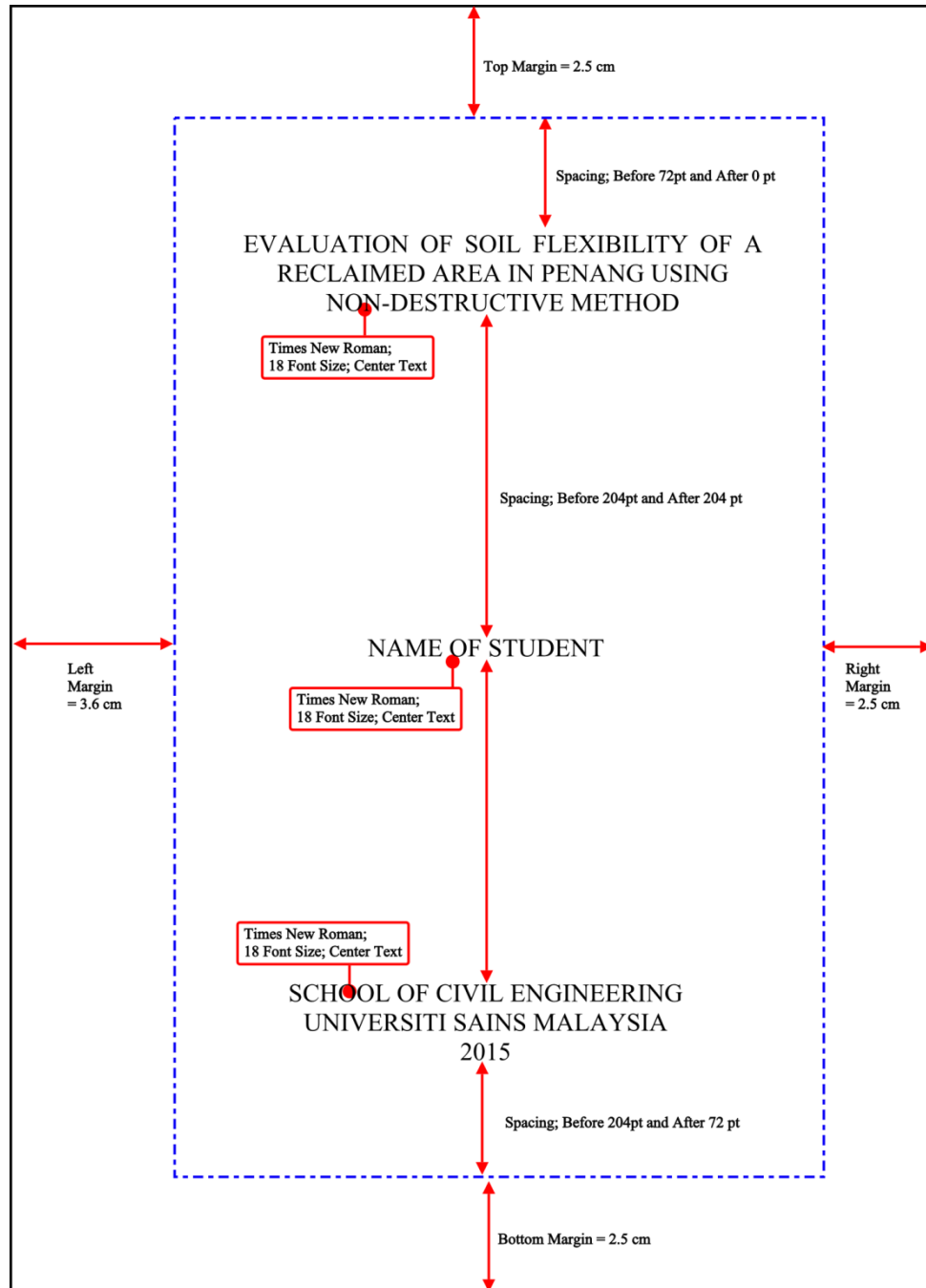


Figure C1: Sample of Cover Page (Hardbound Cover)

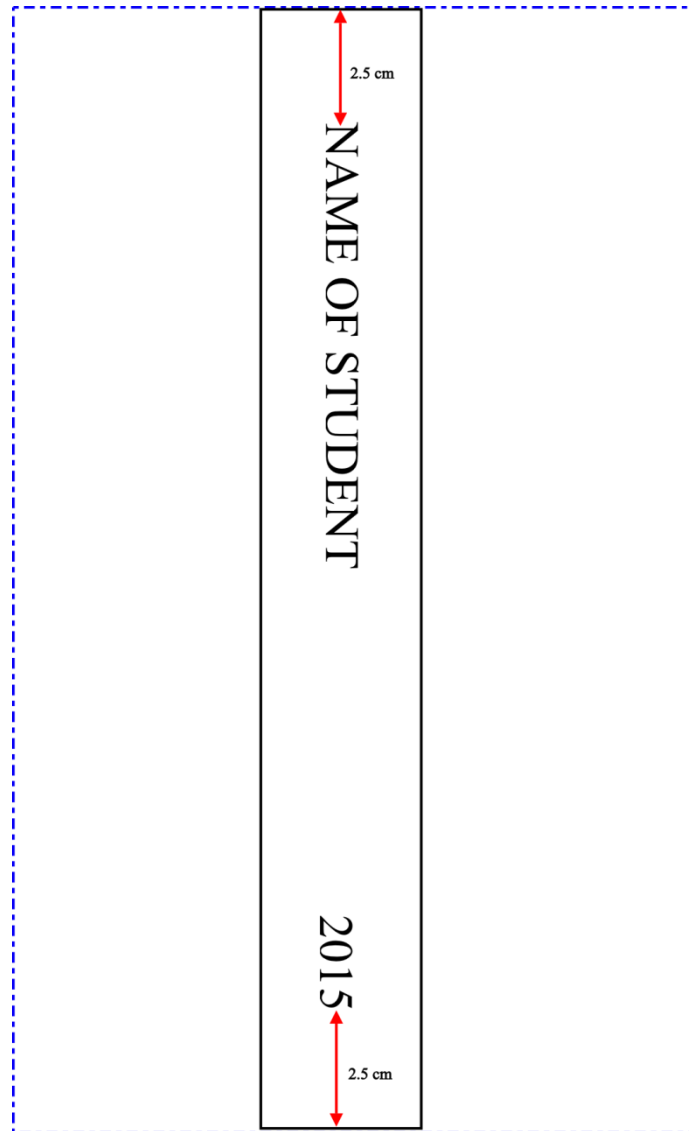


Figure C2: Sample of Spine Cover (Hardbound Cover)

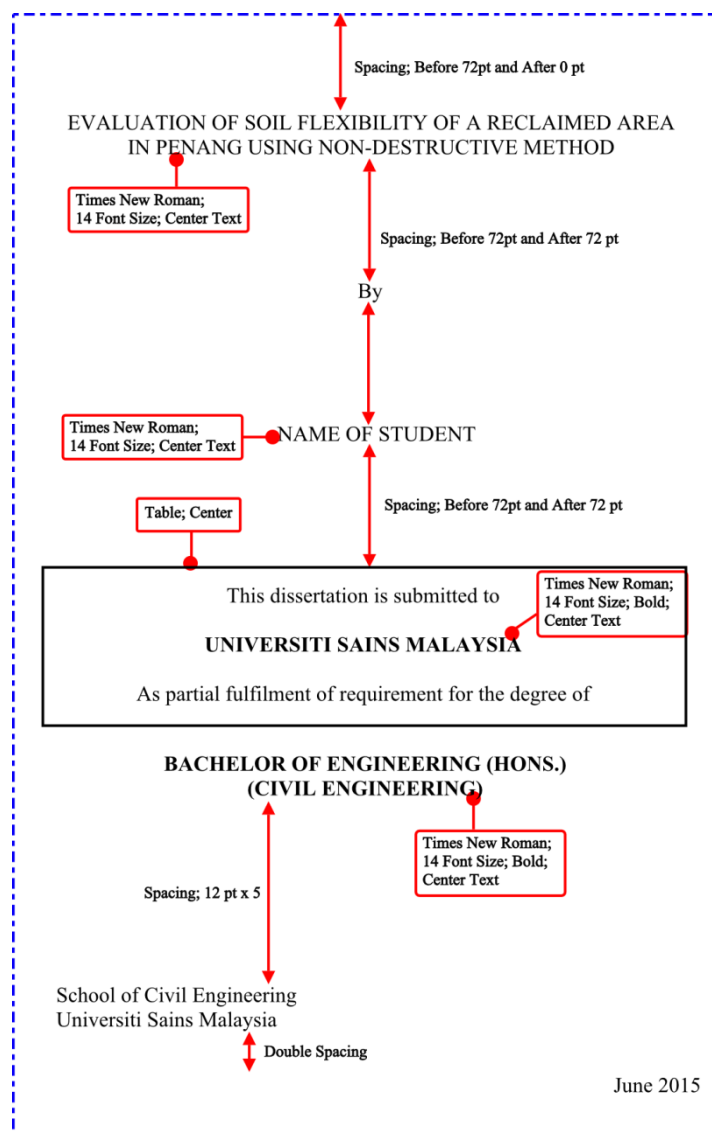


Figure C3: Sample of Title Page (Soft Cover)

C4.4 Acknowledgements

This page is specially dedicated for you to express your deep gratitude to all those who have directly or indirectly assisted you to complete the research work and the dissertation. This may include your supervisor who guided you all these while, parents who gave you the moral support, colleagues that you share ideas with, technicians who assisted you in the laboratory or agencies that funded your study. Acknowledgements for grants or any other special funding should be listed here. Express your appreciation in a concise manner using pleasant English expressions but avoiding strong emotive language. This section will be the first page and numbered in roman style starting from page ‘ii’ (see Figure C4). Acknowledgements are typically written in one paragraph.

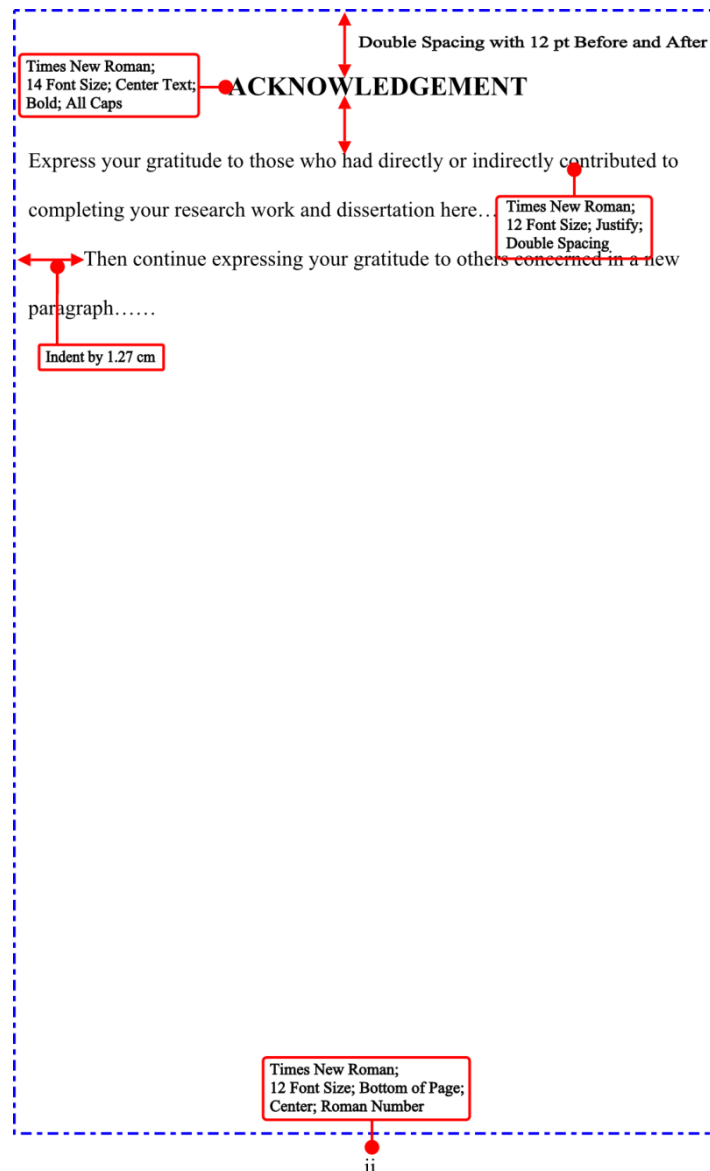


Figure C4: Sample of Acknowledgement Page

C4.5 Abstract (English) and Abstrak (Bahasa Melayu)

The abstract is a brief summary of the entire dissertation. The abstract must be written in **BOTH** Bahasa Melayu and English. Write abstract in **ONLY ONE PARAGRAPH** and on one page, without figures, tables, mathematical equations, references and the like. It should not dwell too much on your study background, rather highlight your objectives, methodology and findings. Abstract should be written largely in past tense. The abstract page numbering style is identical to the Acknowledgements page, that is, page 'iii' (Bahasa Melayu) and 'iv' (English). A sample of the abstract format is available in Figure C5. Do not display dissertation title in the abstract.

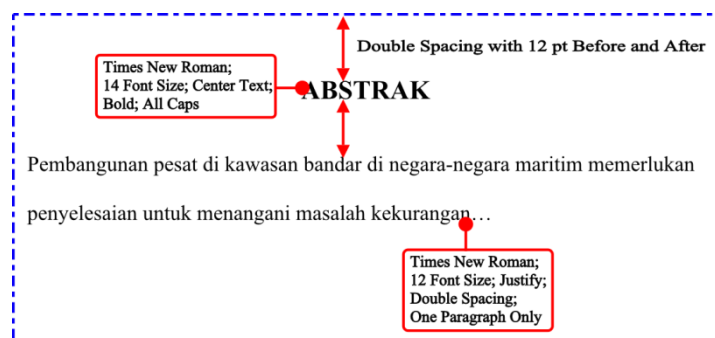


Figure C5: Sample of Abstract Page (in Bahasa Melayu)

C4.6 Table of Contents

All chapter titles, headings and subheadings should appear in this section. The font styles of items listed in the Table of Contents should be identical to the font used in the text and also include the page number. However, the Appendix must not bear any page number. An example of a presentable Table of Contents is shown in Figure C6. Take note when to use capital letters and formatting style for main topics and subtopics.

Times New Roman;
 14 Font Size; Center Text;
 Bold; All Caps

TABLE OF CONTENTS

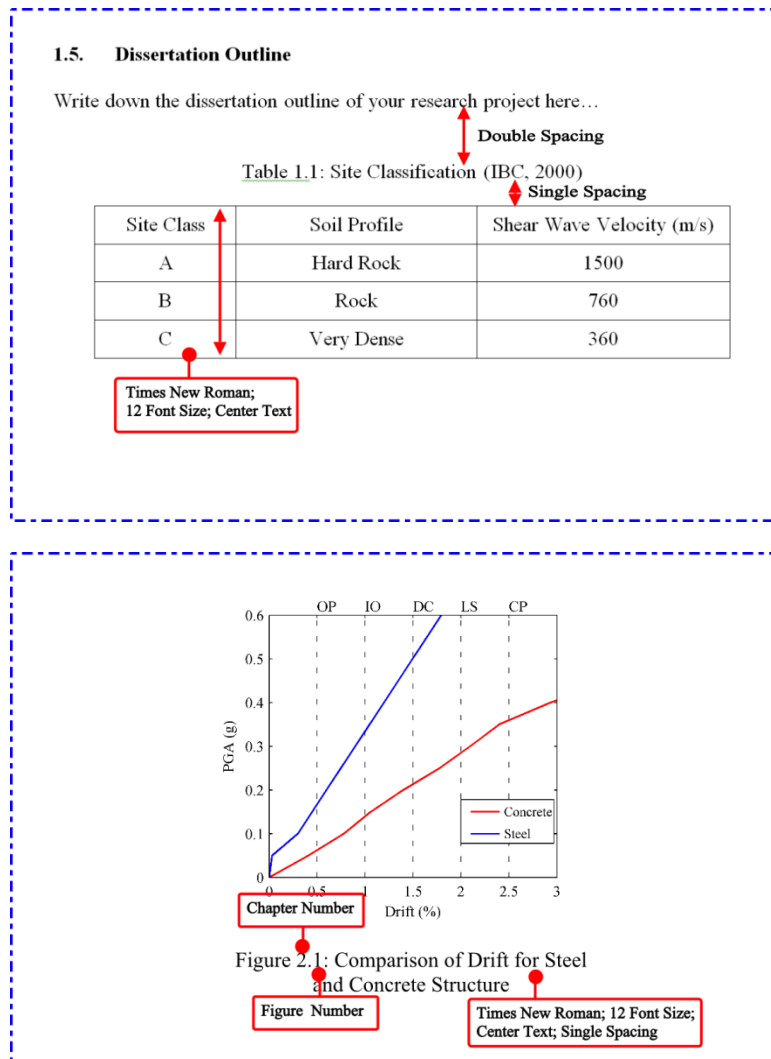
Page Number

ACKNOWLEDGEMENT	II
ABSTRAK	III
ABSTRACT	IV
TABLE OF CONTENTS	V
LIST OF FIGURES	VI
LIST OF TABLES	VII
LIST OF ABBREVIATIONS	VIII
NOMENCLATURES	IX
CHAPTER 1 INTRODUCTION	10
1.1. Background	10
1.2. Problem Statement	2
1.3. Objectives	2
1.4. Scope of Work	2
1.5. Dissertation Outline	2
CHAPTER 2 LITERATURE REVIEW	2
2.1. Overview	3
2.1.1. Earthquake	3
2.2. Soil Classification	3
CHAPTER 3 METHODOLOGY	3
3.1. Overview	4
3.2. A Heuristic Case; A Uniform Multi-Storey Building	4
CHAPTER 4 RESULTS AND DISCUSSION	4
CHAPTER 5 CONCLUSION AND RECOMMENDATIONS	5
REFERENCES	6
APPENDIX A	Without a page number

Figure C6: Sample of Table of Contents

C4.7 Figures and Tables

In the main text, all figures and tables must be numbered and designated according their chapter number, figure number, ‘:’ and caption. In the Appendix, figures and tables are similarly numbered according to the appendix number. Caption must be concise and written in complete sentence. In the figures that you copy paste from excel file, do not replicate the caption at the top of the figure. Both tables and figures should be centered and in regular font style, no bold. A sample is shown in Figure C7. Figures and tables must appear just after they are cited in the main text.



C4.8 Equations

All mathematical equations and any other equations must be written in single spacing, separated from the text body and numbered according to the corresponding chapter on the right hand side, see Figure C8.

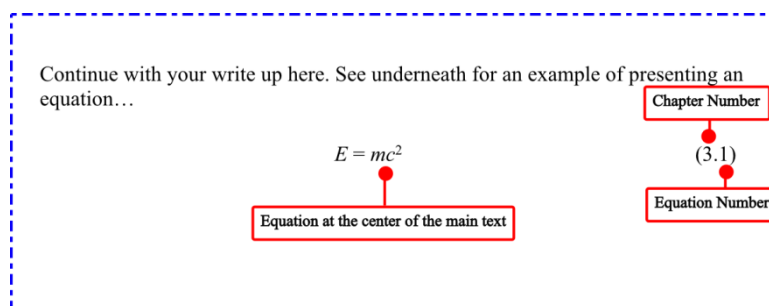


Figure C8: Sample of Equation Arrangement.

C4.9 References

References made to any other publication types must be stated clearly in the dissertation. Details of referencing according to the Harvard System is available in Appendix D. All references cited must be listed in a section after the last chapter and this section should commence on a new page. In that section, each reference should be typed in one vertical spacing but with one vertical space separating each reference.



**SCHOOL OF CIVIL ENGINEERING
ACADEMIC SESSION 2019/2020**

**FINAL YEAR PROJECT EAA492/6
GUIDELINES FOR REFERENCES**

Material Types		
1. Books		6. Citing information someone else has cited
2. eBooks		7. Conference Papers and Proceedings
3. Journal Articles		8. Internet/Websites
4. Thesis		9. Newspaper
5. Lecture Note		10. Standards and Patents
11. Personal Communication		
1. Book		
Material Type	In-Text Example	Reference List Example
Single (1) Author	(Holt, 1997) or Holt (1997) suggested that...	Holt, D. H. (1997), Management Principles and Practices, Prentice-Hall, Sydney.
Two (2) Authors	(William and Pascale, 1997)	William, D. P. and Pascale, G. Q. (1997), Basic Marketing, Irwin, Sydney.
More than 2 Authors	(Bond et al., 1996)	Bond, W. R., Smith, J. T., Brown, K. L. and George, M. (1996), Management of Small Firms, McGraw-Hill, Sydney.
Editor	(ed. Jones, 1998)	Jones, M.D. (ed.) (1998), Management in Australia, Academic Press, London.
2 or more Editors	(eds Bullinger and Warnecke, 1985)	Bullinger, H. J. and Warnecke H. J. (eds) (1985), Toward the Factory of the Future, Springer-Verlag, Berlin.
Translator and Author	(trans. Smith, 2006)	Colorado, J. A. (2006), Economic Theory in the Mexican Context: Recent Developments on the Ground, trans. K Smith, Oxford University Press, Oxford.
Organisation as Author	(Australian Bureau of Agricultural, 2001)	Australian Bureau of Agricultural (2001), Aquaculture Development in Australia, ABARE, Canberra.
Chapter or Article in Edited Book	A number of disturbing facts intrude' (Milkman, 1998, p. 25)	A number of disturbing facts intrude' (Milkman, 1998, p. 25)
Different Works by Same Author in Same Year	<ul style="list-style-type: none"> (Bond, 1991a) (Bond, 1991b) 	<ul style="list-style-type: none"> Bond, G. (1991a), Business Ethics, McGraw-Hill, Sydney. Bond, G. (1991b), Corporate Governance, Irwin, London.
2. eBooks		

E-book	(Aghion and Durlauf, 2005)	Aghion, P. and Durlauf, S. (eds.) (2005), Handbook of Economic Growth, Elsevier, Amsterdam. Available from: Elsevier books. [4 November 2004].
Chapter or Article in an Edited E-book	'Historical thinking is actually a Western perspective' (White, 2002, p. 112)	White, H. (2002), The Westernization of World History in Western Historical Thinking: An Intercultural Debate, ed J Rusen, Berghahn Books, New York pp. 111-119. Available from: ACLS Humanities E-Book. [14 May 2009].
3. Journal Articles		
Print Format	(Conley and Galeson 1998)	Conley, T. G. and Galeson, D. W. (1998), Nativity and Wealth in Mid-Nineteenth Century Cities, Journal of Economic History, Vol. 58, No. 2, pp. 468-493.
Electronic Database Format	(Liveris, 2011)	Liveris, A. (2011), Ethics as a Strategy, Leadership Excellence, Vol. 28, No. 2, pp.17-18. Available from: Proquest [23 June 2011].
Single (1) Author	(Zhang, 2010) or Zhang (2010) mentioned that...	Zhang, L. (2010), A Simple Method for Evaluating Liquefaction Potential From Shear Wave Velocity. Frontiers of Architecture and Civil Engineering in China, Vol. 4, No. 2, pp. 178-195.
2 Authors	(Galal and Naimi, 2008) or Galal and Naimi (2008) wrote that...	Galal, K. and Naimi, M. (2008), Effect of Soil Conditions on the Response of Reinforced Concrete Tall Structures to Near-Fault Earthquakes. The Structural Design of Tall and Special Buildings, Vol. 17, No. 3, pp. 541-562.
More than 3 Authors	(Dobry et al., 2000) or-Dobry et al. (2000) suggested that...	Dobry, R., Borchardt, R., Crouse, C., Idriss, I., Joyner, W., Martin, G. R., Power, M., Rinne, E. and Seed, R. (2000), New Site Coefficients and Site Classification System Used in Recent Building Seismic Code Provisions. Earthquake Spectra, Vol. 16, No. 1, pp. 41-67.
4. Theses		
Unpublished	(Hos, 2005)	Hos, J. P. (2005), Mechanochemically Synthesized Nanomaterials for Intermediate Temperature Solid Oxide Fuel Cell Membranes. Ph.D thesis, University of Western Australia.
Published	(May, 2007)	May, B. (2007), A Survey of Radial Velocities in The Zodiacal Dust Cloud. Bristol UK, Canopus Publishing.
Retrieved From a Database	(Baril, 2006)	Baril, M. (2006), A Distributed Conceptual Model for Stream Salinity Generation Processes: A Systematic Data-Based Approach. WU2006.0058. Available from: Australasian Digital Theses Program. [12 August 2008].
5. Lecture Note		
Material Type	In-Text Example	Reference List Example
Lecture Notes	(Foster, 2004)	Foster, T. (2004), Balance sheets, lecture notes distributed in Financial Accounting 101 at The University of Western Australia, Crawley on 2 November 2005.
6. Citing Information Someone Else Has Cited		
Material Type	In-Text Example	Reference List Example
Citing Information that Someone Else has Cited	(O'Reilly, cited in Byrne, 2008)	In the reference list provide the details of the author who has done the citing.
7. Conference Papers and Proceedings		

Material Type	In-Text Example	Reference List Example
Print Format	(Riley, 1992)	Riley, D. (1992), Industrial Relations in Australian Education, in Contemporary Australasian Industrial Relations: Proceedings of the sixth AIRAANZ conference, ed. D. Blackmur, AIRAANZ, Sydney, pp. 124-140.
Electronic Format	(Fan et al., 2000)	Fan, W., Gordon, M. D. and Pathak, R. (2000), Personalization of Search Engine Services for Effective Retrieval and Knowledge Management, Proceedings of the twenty-first international conference on information systems, pp. 20-34. Available from: ACM Portal: ACM Digital Library. [24 June 2004].
Unpublished	(Brown and Caste, 1990)	Brown, S. and Caste, V. (2004), Integrated Obstacle Detection Framework. Paper presented at the IEEE Intelligent Vehicles Symposium, IEEE, Detroit MI.
8. Internet/Websites		
Material Type	In-Text Example	Reference List Example
Webpage: No Author	(Improve indigenous housing, 2007) <i>Use first few words of the page title</i>	Improve Indigenous Housing Now, Government Told, (2007). Available from: < http://www.architecture.com.au/i-cms?page=10220 >. [8 February 2009].
Webpage: No Date	(Jones, n.d.)	Jones, M. D. n.d., Commentary on Indigenous Housing Initiatives. Available from: < http://www.architecture.com.au >. [6 June 2009].
Web Document	(Department of Industry, Tourism and Resources, 2006)	Department of Industry, Tourism and Resources (2006), Being Prepared for an Influenza Pandemic: a Kit for Small Businesses, Government of Australia, Available from: < http://www.innovation.gov.au >. [28 February 2009].
Website	(Australian Securities Exchange, 2009)	Australian Securities Exchange (2009), Market Information. Available from: < http://www.asx.com.au/professionals/market_information/index.htm >. [5 July 2009].
Blog	(Newton, 2007)	Newton, A. (2007), Newcastle Toolkit. 16 January 2007. Angela Newton: Blog. Available from: < https://elgg.leeds.ac.uk/libajn/weblog/ >. [23 February 2007].
Computer Software	(OpenOffice.org, 2005)	OpenOffice.org, Computer Software 2005. Available from: < http://www.openoffice.org >. [11 January 2005].
Web Based Image / table / figure	(The Lunar Interior, 2000)	The Lunar Interior, 2000. Available from: < http://www.planetscapes.com/solar/browse/moon/moonint.jpg >. [28 November 2000].
Webpage: No Date	(Jones, n.d.)	Jones, M. D. n.d., Commentary on Indigenous Housing Initiatives. Available from: < http://www.architecture.com.au >. [6 June 2009].

9. Newspaper		
Material Type	In-Text Example	Reference List Example
Print	(Ionesco, 2001)	Ionesco, J. (2001), Federal Election: New Chip in politics, The Advertiser, 23 October, p. 10.
Electronic Database	(Meryment, 2006)	Meryment, E. (2006), Distaff Winemakers Raise A Glass of Their Own To Their Own, The Australian, 7 October, p. 5. Available from: Factiva. [2 February 2007].
From a Website	(Hilts, 1999)	Hilts, P. J. (1999), In Forecasting Their Emotions, Most People Flunk Out, The New York Times, 16 February. Available from < http://www.nytimes.com >. [19 February 2000].
No Author	(The Sydney Morning Herald, 7 January 2011, p. 12)	Not required.
10. Standards and Patents		
Material Type	In-Text Example	Reference List Example
Patent	(Cookson, 1985)	Cookson, A. H. (1985), Particle Trap for Compressed Gas Insulated Transmission Systems, US Patent 4554399.
Retrieved From a Database	(Standards Australia, 2008)	Standards Australia (2008), Personal Floatation Devices - General Requirements. AS 4758.1-2008. Available from: Standards Australia Online. [1 December 2008].
Published	(Standards Australia/New Zealand Standard, 1994)	Standards Australia (1994), Information Processing - Text and Office Systems - Office Document Architecture (ODA) and Interchange Format: Part 10: Formal Specifications, AS/NZS 3951.10:1994, Standards Australia, NSW.
11. Personal Communication		
Material Type	In-Text Example	Reference List Example
Telephone Call, Interview, e-mail, etc.	<p>If the information you are referencing was obtained by a personal communication such as a telephone call, an interview or an email that fact is usually documented in the text and are not added to the reference list. If desired you can add the abbreviation pers. comm. to the reference.</p> <ul style="list-style-type: none"> - When interviewed on 6 June 2008, Mr M Ward confirmed... - Mr M Ward confirmed this by facsimile on 6 June 2008. - It has been confirmed that he will be touring Australia in the middle of next year (Mr M Ward, 2008, pers. comm., 6 June). 	