



**GUIDELINES FOR THE  
IMPLEMENTATION OF  
FINAL YEAR PROJECT  
FACULTY OF CIVIL ENGINEERING AND  
BUILT ENVIRONMENT**

Prepared by

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## **1.0 INTRODUCTION**

In fulfillment of the requirements for the award of a Bachelor's degree offered at the Faculty of Civil Engineering and Built Environment (FKAAB), each student is required to conduct a project-type course in the last academic year, i.e. the Final Year Project (FYP).

FYP is typically implemented in two semesters; FYP 1 (TWO credits) and FYP 2 (FOUR credits). For FYP 1, students are required to prepare a Project Proposal and for FYP 2, a Final Report is to be produced. Both reports should be in accordance with the University's Thesis Writing Guide and must be submitted to the faculty on the prescribed dates.

These guidelines are intended to assist in managing the implementation of FYP efficiently in the faculty and should be referred to by all parties involved in FYP at the faculty level, particularly the Students, Supervisors, Examination Panelists and FYP Committee.

## **2.0 DEFINITION**

FYP is a form of training and exposure to engineering research undertaken by students independently and systematically under the guidance of a supervisor selected among academicians. The project focuses on a particular field of knowledge, the use of principles and related concepts and the application of techniques dealing with complex yet relevant engineering problems.

## **3.0 AIM**

The aim of FYP is to train students to use knowledge, skills and experience gained during the learning process in order to produce skilled and competent graduates. This goal should be achieved through practical research work and preparation of reports in a systematic and professional manner.

## **4.0 OBJECTIVES**

The objectives of FYP are to train students to:

- (i) Apply the knowledge, skills and experience gained from their studies in solving engineering problems.
- (ii) Effectively conduct research work and produce academic writing in the time given.
- (iii) Appreciate and be able to conduct life-long learning.

## 5.0 LEARNING OUTCOMES

Upon completing FYP, it is hoped that students are able to:

- (i) Plan research work using proper research techniques and existing knowledge and skills.
- (ii) Organise planned research work systematically and communicate the findings effectively through report writing and oral presentation.
- (iii) Adapt to changes required to research based on availability of resources, technological improvements and recommendations from the research supervisor and/or examination panel.
- (iv) Interpret results from the analyses of data and formulate solutions to engineering problems with respect to the research topic.
- (v) Revise research processes in accordance with current methodologies and analytical methods, and effectively communicate them in the project report and technical paper.
- (vi) Justify the application of research methods and defend the findings and conclusions drawn from the project with respect to past and current research.

## 6.0 PROJECT CATEGORIES

FYP may be either one or a combination of the following categories of projects:

- (i) **Research:** Research on a specific topic in the field of engineering. Students are required to use theory, collect data and process them using appropriate analytical methods such statistical analysis.
- (ii) **Case Study:** Specialised engineering studies, in which students are required to identify and solve problems, analyse data and recommend solutions to problems in the form of a framework and/or an action plan.
- (iii) **Industrial Study:** Studies relevant to the needs of research and/or industrial problems that can be studied to improve existing processes or systems.
- (iv) **Software/Database Development:** The development of computer literacy programming, software improvements for innovations, and the production of models, designs, systems, etc. according to engineering disciplines.

## 7.0 LEVEL AND SCOPE

FYP is a course designed to train and provide exposure to the students in research work. Therefore, FYP does not require in-depth analytical detail. However, students should be able to conduct independent enquiry as well as perform critical evaluation and build competence in carrying out the project.

FYP may either be a new study or an extension of past research. However, similar projects that have been carried out at the faculty level or at other institutions of higher learning are PROHIBITED. The scope of the project should be consistent and relevant to the field of civil engineering and must be to the level of a Bachelor's degree.

Students also need to efficiently manage the time allocated to FYP, which is 80 hours per semester for FYP 1 students and 160 hours of study per semester for FYP 2 students.

To meet the requirements of the level and scope of FYP, several criteria should be followed:

- (i) The research must involve work that can be completed within 12 weeks for each semester (FYP 1 and FYP 2).
- (ii) Research objectives must NOT EXCEED three (3).
- (iii) Ensure that all laboratory equipment required to conduct the study is adequate and in good condition.
- (iv) The final report must NOT EXCEED one hundred (100) pages, excluding appendices.
- (v) The technical paper must be AT LEAST six (6) pages and NOT EXCEED ten (10) pages.

## **8.0 ROLES AND RESPONSIBILITIES**

Success in the implementation of FYP can be achieved if all parties involved fulfill their respective roles and responsibilities.

### **8.1 Student**

In order to produce an FYP that fulfils all conditions set, the Student must perform the following responsibilities:

- (i) Register for the FYP 1 and FYP 2 courses before the closing date set by the University.
- (ii) Adhere to the FYP work schedules set by the faculty.
- (iii) Select a supervisor and propose an FYP title along with a summary via the online system before the closing date set by the faculty.
- (iv) Ensure that the FYP research is original (either a new research or an extension of a previously conducted research).
- (v) Regularly meet with the supervisor to discuss matters pertaining to FYP.
- (vi) Record all activities at e-log activity and verify by supervisor.
- (vii) Systematically plan and manage the project as well as the time allocated for the project.
- (viii) Prepare and submit all items of assessment (project proposal, e-log activity, technical paper and draft final report) in accordance with the prescribed time and format.
- (ix) Avoid plagiarising the work of other researchers.
- (x) Give presentations at the FYP 1 and FYP 2 seminars.

### **8.2 Supervisor**

A Supervisor serves as a mentor, a monitor and an evaluator to the student under his or her supervision. Guidance, monitoring and evaluation should be carried out continuously. The roles and responsibilities of the Supervisor include the following:

- (i) Discuss the FYP title with the student.
- (ii) Confirm the proposed title and summary of the FYP that will be conducted by the student.

- (iii) Provide guidance and advise to the student on conducting the FYP research.
- (iv) Ensure that the student's FYP research does not go beyond the level and scope of FYP stipulated by the faculty.
- (v) Verify the student's e-log activity via TCIS.
- (vi) Check and verify the student's project proposal, technical paper and draft final report
- (vii) Endorse or verify (if appropriate) FYP forms submitted by the student.
- (viii) Evaluate the e-log activity, project proposal, technical paper and draft final report fairly and without prejudice.
- (ix) Enter the student's marks into the online system before the due date set by the faculty.
- (x) Prepare a report if the student has failed his or her FYP.

### **8.3 Examination Panel**

The Examination Panel consists of three academicians appointed by the faculty. The main function of the panel is to evaluate the items of assessment produced by the student. The roles and responsibilities of the Examination Panel include the following:

- (i) Evaluate the student's project proposal, draft final report, technical paper and oral presentation fairly and without prejudice.
- (ii) Attend the FYP seminar sessions that involve students assessed by the panel.
- (iii) Provide opinions and/or constructive criticism pertaining to the student's FYP research.
- (iv) Enter the student's marks into the online system before the due date set by the faculty.

### **8.4 Evaluation Panels**

The Evaluation Panels is the appointed from a generic engineering cluster (e.g. Structural, Environmental, Geotechnical, Transportation, Construction, etc.), whose role is to check, consider and approve the student's proposed FYP research during the initial stages of FYP 1. Approval is subject to the following:

- (i) The originality of the project.
- (ii) The appropriateness of the project with the level of Bachelor's degree and the direction of research pursued by the department.
- (iii) The scope of the FYP stipulated by the faculty.

### **8.5 Final Year Project Committee**

The FYP committee, which is under the authority of Deputy Dean (Academic and Internationalisation), is chaired by the FYP Coordinator and is made up of several Department Representatives and an Information Technology Officer. This committee is answerable to the Faculty's Academic Committee. The roles and responsibilities of the FYP Committee include the following:

- (i) Ensure that the implementation of FYP in the faculty is in accordance with the latest RPP-07: University Procedure for the Implementation of Final Year Project.
- (ii) Prepare the FYP 1 and FYP 2 work schedule.
- (iii) Effectively disseminate information pertaining to the implementation of FYP to all parties involved.
- (iv) Allocate all supervisors with a fair quota of FYP students.
- (v) Plan and conduct methodology classes for FYP students.

- (vi) Manage the receiving of project proposals, technical reports and final report drafts from students, and distribute them to the examination panel.
- (vii) Determine the students who will be allowed to present at the FYP 1 and FYP 2 seminars.
- (viii) Propose names of academicians to be appointed as members of the examination panels and prepare presentation schedules for the FYP 1 and FYP 2 seminars.
- (ix) Plan and conduct the FYP 1 and FYP 2 seminars, including the FYP Awards Ceremony.
- (x) Ensure that the assessment of FYP students is conducted according to the time set by the faculty and is managed systematically.
- (xi) Monitor the implementation and utilisation of the FYP online system, and whenever required, make efforts to improve it.
- (xii) Sum up and enter students' marks into the University's student assessment system (SAS).
- (xiii) Analyse the overall performance of FYP students at the end of each semester and identify problematic students.
- (xiv) Monitor the implementation of FYP in the faculty, ensure its success and make efforts for continuous improvements.

## **9.0 IMPLEMENTATION AND PROCEDURES**

FYP is conducted over the period of TWO (2) semesters and is allocated a total of SIX (6) credits.

### **9.1 Conditions for the Implementation of FYP**

The implementation of FYP is subject to the following conditions:

- (i) FYP 1 and FYP 2 should generally be conducted over the period of two successive semesters, except in special cases.
- (ii) FYP 1 is a prerequisite to FYP 2, thus students must first pass FYP 1 in order to proceed with FYP 2.
- (iii) Students who are suspended or whose studies are deferred for one (1) semester are allowed to continue with FYP 2 the following semester.
- (iv) If the student has failed FYP 1, the student must repeat the course using either the same FYP title or a new one.
- (v) If the student has failed FYP 2, the student must repeat the course using the same FYP title.

### **9.2 Registration of FYP**

Registration for the FYP course must be done in accordance with the Academic Regulations, i.e. via SMAP Online, before the semester begins. Students will then be required to access the FYP Online system to select a supervisor and provide details of their FYP. Each student who has registered for the FYP course must accomplish the course under the supervision of an academician, follow all conditions stipulated in this guidelines and comply with the FYP work schedules (see Appendix 1). Students who fail to do so will be advised to withdraw from the course.



### **9.3 Selection of FYP Supervisor and Title**

Students are required to select a supervisor on-line before or during Week 1 of the academic calendar via the FYP Online system. The main supervisor must be a qualified academic staff appointed by the Faculty. After discussing the Project Title and Synopsis with the supervisor using the form given in Appendix 2, the student must then submit the project title and synopsis on-line for approval by the Head of Engineering Panel via the FYP Online system no later than Week 2.

### **9.4 FYP Methodology Class**

Students are required to attend the FYP Methodology Class organised by the Faculty during the early stages of each semester. The class is designed to explain the implementation of FYP in FKAAS and to provide guidance to students on conducting research and preparing project proposals, technical papers, posters and final reports. The contents of the class are shown in Appendix 3.

### **9.5 Appointing a Second Supervisor**

If necessary, a Second Supervisor may be appointed. The Second Supervisor must be an academician or a professional within or outside of the University. An application for the appointment of a Second Supervisor must be submitted to the FYP Coordinator in advance. The student must obtain endorsement from the main Supervisor, agreement to co-supervise from the proposed Second Supervisor and approval from the Deputy Dean (Academic and Internationalisation). The Application To Appoint A Second Supervisor form is given in Appendix 4.

### **9.6 Appointing a New Supervisor**

Students are not encouraged to arbitrarily change supervisors. Only under certain circumstances shall the Faculty allow the change of supervisor. To do this, the student must obtain a release consent from the current Supervisor, agreement to supervise from the proposed New Supervisor and approval from the Deputy Dean (Academic and Internationalisation). The Application To Appoint A New Supervisor form is given in Appendix 5. It must be submitted to the FYP Coordinator.

### **9.7 Changing Research Title**

Students are also not encouraged to change their research title as they wish. If major changes to the research are necessary, as suggested by either the Supervisor, Head of Engineering Panel or Examination Panel, the student must submit an application to change research title to the FYP Coordinator. The aforesaid major changes may include changes to the field of research, objectives and/or scope of study. The student must complete the FYP Title and Synopsis form (see Appendix 2) and submit it along with the Application To Change Research Title form (see Appendix 6). The application must be endorsed by the Supervisor and approved by the Head of Engineering Panel.

## **9.8 Using Laboratory Space and Equipment**

Students who intend to use laboratory space and equipment in the faculty will be required to submit an Application To Use Laboratory And Equipment (see Appendix 7 for the form) to the Laboratory personnel. The student must check the availability of the space and equipment with the respective Assistant Engineers, Technicians or Laboratory Assistants and discuss a suitable time and period of usage. The application must be endorsed by the Supervisor and approved by the Head of Laboratory.

## **9.9 Final Report Writing Language**

Final Reports must only be in Bahasa Melayu or English.

## **9.10 Incorporating Complex Problem Solving (CPS) in FYP**

Final year projects must incorporate all CPS attributes that have been ascertained by the faculty.

## **9.11 Deliverables**

Continuous monitoring and evaluation are essential in the implementation of FYP. To facilitate this process, students are required to provide the following deliverables:

### **9.11.1 e-Log Activities**

The e-log is the Student's record of work accomplished during FYP through SMAP online. The e-log should be fill after meeting with the Supervisor, who will verify the records made by the student.

These records include:

- (i) Title, objectives, scope and work plan.
- (ii) Important dates pertaining to the implementation and evaluation of the project.
- (iii) Dates of meetings with the Supervisor, and outcomes of the meetings such as discussions, advise and instructions.
- (iv) Preparations, problems that have arisen, proposed solutions and equipment that is needed.
- (v) Raw data and/or results achieved to date.
- (vi) Sketching of all relevant diagrams.

### **9.11.2 Seminars**

Students must participate in seminars that are designed to train students to be able to give oral presentations of their research. Details of the seminars are as follows:

### **9.11.2.1 FYP 1 Seminar**

This seminar is designed to enable students to deliver a presentation of the proposed research to be conducted in their FYP. Students must have the following prepared:

- (i) Project Proposal that has been approved by the Supervisor.
- (ii) Oral presentation (PowerPoint, Flash, etc.) for 15 minutes.

The Project Proposal must be written in Bahasa Malaysia or English in accordance with the University's Thesis Writing Guide and must contain the components as stated in section 9.11.4.1.

The Project Proposal **MUST** be submitted to examiner panel no later than Week 12. Failure to do so will result in the student being **PROHIBITED** from presenting at the FYP 1 Seminar. Ultimately, the student will be given **GRADE E (FAIL)**.

### **9.11.2.2 FYP 2 Seminar**

This seminar is designed to enable students to present the findings of their FYP research. Students must have the following prepared:

- (i) Draft Final Report that has been approved by the Supervisor.
- (ii) Oral presentation (PowerPoint, Flash, etc.) for 15 minutes.

The Draft Final Report must be written in Bahasa Malaysia or English in accordance with the University's Thesis Writing Guide and must contain the components as stated in section 9.11.4.2.

The Draft Final Report **MUST** be submitted to examiner panel no later than Week 12. Failure to do so will result in the student being **PROHIBITED** from presenting at the FYP 2 Seminar. Ultimately, the student will be given **GRADE E (FAIL)**.

### **9.11.3 Technical Paper**

The Student must produce a Technical Paper for the FYP 2 Seminar. This is to expose the Student to the writing style and requirement of technical papers for seminars. The paper must be written in Bahasa Malaysia or English, comply with the format prescribed by the faculty (see Appendix 8) and contain the following items:

- (i) Abstract
- (ii) Introduction
- (iii) Materials and methods
- (iv) Results and discussions
- (v) Conclusions
- (vi) References

The Technical Paper **MUST** be submitted to the Supervisor for assessment no later than Week 12.

#### **9.11.4 Project Reports**

During the course of FYP, the Student must provide two types of project reports in Bahasa Malaysia or English, which is the Project Proposal for FYP 1 and the Final Report for FYP 2.

##### **9.11.4.1 Project Proposal**

This report is prepared during FYP 1 and is in the form of a proposal of the research that is to be carried out. It must comply with the University's Thesis Writing Guide and must contain the following:

- (i) Abstract
- (ii) Introduction (background, problem statement, objectives, scope)
- (iii) Literature review
- (iv) Methodology
- (v) Expected results
- (vi) Planning (Gantt chart)
- (vii) References

##### **9.11.4.2 Final Report**

The Final Report is a comprehensive report prepared during FYP 2 that details the completed research. It must comply with the University's Thesis Writing Guide and must contain the following:

- (i) Abstract
- (ii) Introduction
- (iii) Literature review
- (iv) Methodology
- (v) Results and discussions
- (vi) Conclusions
- (vii) References

#### **9.12 Submission of Final Report**

The Student must prepare softcopy of the Final Report. The softcopy of Final Report must be submitted to [ereport.uthm.edu.my](http://ereport.uthm.edu.my) and Google Form that prepared by FYP Committee.

All copies of the Final Report must comply with the University's Thesis Writing Guide and must be verified by the Supervisor.

The Faculty has the right to suspend the decision to award a Bachelor's degree to the student if:

- (i) The Student has failed to submit the copies of the Final Report at the time and date set by the Faculty.
- (ii) The Final Report that has been submitted is does not comply with the format stipulated in University's Thesis Writing Guide.

The Student must complete the Submission of Final Report form (see Appendix 9) and submit the form to the FKAAB no later than 14 days after the last date of the University final examinations period.

If the Final Report is still not submitted before the meeting of the Committee for Examinations / Examination Results, the Student will be given GRADE E (FAIL) for his or her FYP.

## 10.0 ASSESSMENT

The FYP assessment is based on the Student's accomplishment and ability to prepare a project report, technical paper, presentation materials and poster, deliver an oral presentation during the seminar and effectively use the logbook.

The proportion of FYP 1 and marks prescribed by the faculty are as follows:

Presentation and Soft skills assessment : 35%  
Project Report : 65%

The proportion of FYP 2 and marks prescribed by the faculty are as follows:

Presentation and Soft skills assessment : 25%  
Project Report : 55%  
Technical Paper : 20%

Assessment is done by the Supervisor and Examination Panel separately and discretely. The distribution of marks for the two components stated above are:

Examination Panel : 45%  
Supervisor : 55%

The justification of marks is shown in Table 1. The allocation of marks and criteria considered in the assessment process are shown in the assessment forms in Appendix 10 (FYP 1) and Appendix 11 (FYP 2).

Table 1: FYP justification of marks

	Marks						
	FYP 1			FYP 2			
	Presentation	Project Proposal	Total	Presentation	Draft Final Report	Technical Paper	Total
Examination Panel	15	30	45	10	25	10	45
Supervisor	Soft skills Assessment	Project Proposal	Total	Soft skills Assessment	Draft Final Report	Technical Paper	Total
	20	35	55	15	30	10	55
Total	35	65	100	25	55	20	100

### **11.0 CONDITIONS FOR PASSING FYP**

Students will pass their FYP only if they fulfill ALL of the following conditions:

- (i) Obtain at least 40 marks.
- (ii) Fulfill ALL of the following conditions of assessment:
  - (a) Give presentations at the FYP 1 and FYP 2 Seminars
  - (b) Submit e-log activities, technical paper and project reports as described in section 9.11
- (iii) Attend at least 80% of the meeting hours set by the Supervisor in each semester (FYP 1 and FYP 2)
- (iv) Submit soft copy of final report via EReport UTHM Repository and AUTHOR System.
- (v) There are no elements of plagiarism.

### **12.0 COPYRIGHT**

The final report submitted by the student will become property of the University. Any new discovery, design, product or patent is the property of the University. However, the University may consider applications to share the property rights with the student, supervisor or external organiser.

Report writing copyright belongs to the author.

### **13.0 DEFERMENT AND FAILURE OF FYP 2**

In the event of deferment by the University or withdrawal that is authorised by the Faculty under provisions of the Academic Regulations, students may conduct their FYP 2 in the following semester.

Students who have failed FYP 2 must repeat FYP 2 in the following semester.

### **14.0 REFERENCES**

1. RPP-07: Procedure for the Implementation of Final Year Project (2010), Universiti Tun Hussein Onn Malaysia.
2. Final Year Project Guidelines (2008), Academic Management Office, Universiti Tun Hussein Onn Malaysia.
3. Thesis Writing Guide (2012), Center for Postgraduate Studies, Universiti Tun Hussein Onn Malaysia.
4. Academic Regulations: Bachelor Degree and Diploma Programmes (2013), Universiti Tun Hussein Onn Malaysia.

## Work Schedules

FYP 1		
Week	Task	Person(s) Responsible
1	Registration and selection of Supervisor via Online System	Student
1 – 2	Determination of FYP Title and entry of FYP Title and Synopsis into the Online System	Student, Supervisor
	FYP Methodology Class	Student
3 – 4	Confirmation of FYP Title/Research	Head of Engineering Panel
8	Dissemination of tentative FYP 1 Seminar schedule	FYP Committee
1 – 11	Research work and writing	Student
12	Submission of FYP Project Proposal approved by Supervisor to the FKAAS Office	Student
13	Dissemination of official FYP 1 Seminar schedule	FYP Committee
13 – 14	Assessment of FYP Project Proposal	Supervisor, Examination Panel
14 or 15	FYP Seminar	Student, Examination Panel
	Oral presentation of FYP Project Proposal (aided by PowerPoint slides)	Student
	Assessment of student's presentation and entry of marks via Online System	Examination Panel
13 – 16	Entry of marks via Online System	Supervisor, Examination Panel

FYP 2		
Week	Task	Person(s) Responsible
8	Dissemination of tentative FYP 2 Seminar schedule	FYP Committee
1 – 11	Research work and writing	Student
12	Submission of FYP Draft Final Report approved by the Supervisor to the FKAAS Office and Technical Paper to the Supervisor	Student
13	Dissemination of official FYP 2 Seminar schedule	FYP Committee
13 – 14	Assessment of FYP Draft Final Report	Examination Panel
	Assessment of FYP Draft Final Report and Technical Paper	Supervisor
14 or 15	FYP 2 Seminar	Student, Examination Panel
	Oral presentation of FYP (aided by Poster)	Student
	Assessment of student's presentation (including Poster) and entry of marks via Online System	Examination Panel
13 – 15	Entry of marks via Online System	Examination Panel
13 – 16	Entry of marks via Online System	Supervisor
18	Submission of hard-bound copies of FYP Final Report	Student

## Project Title and Synopsis Form



Faculty of Civil Engineering and Built Environment  
Universiti Tun Hussein Onn Malaysia

### FINAL YEAR PROJECT PROJECT TITLE AND SYNOPSIS

Instructions:

- (1) Complete this form after discussing with your supervisor and attach it in your FYP Logbook.
- (2) Submit these information to the FYP Online System (via SMAP Online) by the end of Week 2 for approval by:
  - (a) the Supervisor
  - (b) the Head Cluster

<b>PART I: STUDENT AND SUPERVISOR DETAILS</b>		
<b>Student's Name:</b>		
<b>Matric Card No.:</b>	<b>FYP Code:</b>	<b>Semester / Session:</b>
<b>Supervisor's Name:</b>		
<b>Department</b> <i>(Please tick)</i> : <input type="checkbox"/> KKAP <input type="checkbox"/> KKBP <input type="checkbox"/> KKIG <input type="checkbox"/> KKSB		
<b>PART II: FYP TITLE AND SYNOPSIS</b>		
<b>Title:</b>		
<b>Objectives</b> <i>(up to 3 only)</i> :		
<b>Scope of Study:</b>		
<b>Expected Results:</b>		
<b>Engineering Field:</b> <i>(Please tick)</i>		
<input type="checkbox"/> Water & Environmental (KKAP) <input type="checkbox"/> Building & Construction (KKBP) <input type="checkbox"/> Infrastructure & Geomatic (KKIG) <input type="checkbox"/> Structural & Material (KKSB)		
<b>Category:</b> <i>(Please tick)</i>		
<input type="checkbox"/> Research <input type="checkbox"/> Industrial Study <input type="checkbox"/> Case Study <input type="checkbox"/> Software/Database Development		



**PART III: DECLARATION BY STUDENT**

I hereby declare that *(Please tick)*:

- All information provided in this form is based on discussions made with my supervisor
- I have submitted all required information to the FYP Online System via *smap.uthm.edu.my*

**Student's Signature:**

**Date:**

**PART IV: VERIFICATION BY SUPERVISOR**

I hereby verify that *(Please tick)*:

- All information provided by the student is based on discussions that the student had with me
- I have checked and approved these information online via *tcis.uthm.edu.my*

**Supervisor's Signature & Official Stamp:**

**Date:**

### Contents of FYP Methodology Class

<b>Methodology Class</b>	
<b>FYP 1</b>	<b>FYP 2</b>
<ol style="list-style-type: none"> <li>1. Introduction to research</li> <li>2. Writing the project proposal               <ol style="list-style-type: none"> <li>(a) Introduction (background, problem statement, objectives, scope, and contribution of study)</li> <li>(b) Literature review</li> <li>(c) Methodology</li> <li>(d) Expected results</li> </ol> </li> <li>3. Format of writing</li> <li>4. Tips on effective presentation</li> </ol>	<ol style="list-style-type: none"> <li>1. Data analysis and delivery of results</li> <li>2. Writing the concluding chapters               <ol style="list-style-type: none"> <li>(a) Results and Discussions</li> <li>(b) Conclusions</li> </ol> </li> <li>3. Format of final report</li> <li>4. Writing of technical paper</li> <li>5. Preparation of poster</li> </ol>

## Application to Appoint a Second Supervisor Form



Faculty of Civil Engineering and Built Environment  
Universiti Tun Hussein Onn Malaysia

FINAL YEAR PROJECT  
APPLICATION TO APPOINT A SECOND SUPERVISOR

PART I: STUDENT AND PROJECT DETAILS		
<b>Student's Name:</b>		
<b>Matric Card No.:</b>	<b>FYP Code:</b>	<b>Semester/Session:</b>
<b>Final Year Project Title:</b>		
<b>Main Supervisor's Name:</b>		
<b>Proposed Second Supervisor's Name:</b>		
PART II: ENDORSEMENT BY MAIN SUPERVISOR		
<p>I hereby agree that the Final Year Project undertaken by the student above requires additional supervision from a second party because of the following reason(s):</p> <p>[ ] This project involves multiple disciplines. A second supervisor is necessary for providing consultation and guidance in the discipline that is beyond my area of expertise.</p> <p>[ ] This project is part of a collaborative research with the second supervisor.</p> <p>[ ] I may not be able to fully commit to this role throughout the course of this project, thus the second supervisor will be instrumental during my time of absence.</p> <p>[ ] Other (please specify):</p> <p>_____</p> <p>_____</p>		
<b>Main Supervisor's Signature:</b>		<b>Date:</b>
<b>Official Stamp:</b>		

**PART III: DECLARATION BY SECOND SUPERVISOR**

I hereby agree to become the Second Supervisor to the student above and accept the responsibility of providing consultation and guidance to the student. I am also aware that this will not count as my work load and I am not required to assess the student, but will receive credit as co-author in publications.

**Second Supervisor's Signature:**

**Date:**

**Official Stamp:**

**PART IV: DELIBERATION BY DEPUTY DEAN (ACADEMIC & INTERNATIONALISATION)**

I hereby **\*approve / reject** this application for the appointment of a Second Supervisor to the student above.

**Deputy Dean's Signature:**

**Date:**

**Official Stamp:**

\* Delete whichever is not applicable

Notes:

- (1) After deliberation by the deputy dean, the student must submit the original copy to the FYP Coordinator.
- (2) The student should make a duplicate copy and attach it in the logbook.

## Application to Appoint a New Supervisor Form



Faculty of Civil Engineering and Built Environment  
Universiti Tun Hussein Onn Malaysia

FINAL YEAR PROJECT  
**APPLICATION TO APPOINT A NEW SUPERVISOR**

PART I: STUDENT AND PROJECT DETAILS		
<b>Student's Name:</b>		
<b>Matric Card No.:</b>	<b>FYP Code:</b>	<b>Semester/Session:</b>
<b>Final Year Project Title:</b>		
<b>Current Supervisor's Name:</b>		
<b>Proposed New Supervisor's Name:</b>		
PART II: ENDORSEMENT BY CURRENT SUPERVISOR		
<p>I hereby agree to hand over the role of Supervisor of the Final Year Project undertaken by the student above to the proposed new supervisor because of the following reason(s):</p> <p>[ ] I will be *resigning / retiring.</p> <p>[ ] I will be taking a *study / sabbatical leave, thus am not able to fulfill my duty as supervisor.</p> <p>[ ] Due to conflict of interest, the student and I have come to a decision that the project should be supervised by the proposed new supervisor.</p> <p>[ ] The student has opted to change his/her field of research, which unfortunately is not in my area of expertise.</p> <p>[ ] Other (please specify):</p> <p>_____</p> <p>_____</p>		
<b>Current Supervisor's Signature:</b>		<b>Date:</b>
<b>Official Stamp:</b>		

**PART III: DECLARATION BY NEW SUPERVISOR**

I hereby agree to become the new supervisor to the student above and accept all the responsibilities of a Supervisor for Final Year Project.

**New Supervisor's Signature:**

**Date:**

**Official Stamp:**

**PART IV: DELIBERATION BY DEPUTY DEAN (ACADEMIC & INTERNATIONALISATION)**

I hereby **\*approve / reject** this application for the appointment of a New Supervisor to the student above.

**Deputy Dean's Signature:**

**Date:**

**Official Stamp:**

\* Delete whichever is not applicable

Notes:

- (1) After deliberation by the deputy dean, the student must submit the original copy to the FYP Coordinator.
- (2) The student should make a duplicate copy and attach it in the logbook.

## Application to Change Research Title Form



Faculty of Civil Engineering and Built Environment  
Universiti Tun Hussein Onn Malaysia

FINAL YEAR PROJECT  
**APPLICATION TO CHANGE RESEARCH TITLE**

<b>PART I: STUDENT AND PROJECT DETAILS</b>		
<b>Student's Name:</b>		
<b>Matric Card No.:</b>	<b>FYP Code:</b>	<b>Semester/Session:</b>
<b>Previous FYP Title:</b>		
<b>New FYP Title:</b>		
<b>PART II: DECLARATION BY STUDENT</b>		
I hereby request permission to change the title of my FYP research as stated above. I have discussed with my supervisor and we have collectively agreed that a change in title is necessary.		
<b>Student's Signature:</b>		<b>Date:</b>
<b>PART III: ENDORSEMENT BY SUPERVISOR</b>		
I hereby confirm that the student and I have come to an agreement that a change in the title of his/her FYP research as stated above is necessary. Thus, I fully support the student's request.		
<b>Supervisor's Signature:</b>		<b>Date:</b>
<b>Official Stamp:</b>		
<b>PART IV: DELIBERATION BY HEAD OF ENGINEERING PANEL</b>		
I hereby <b>*approve / reject</b> this application for the change in title of the student's FYP research.		
<b>Head of Cluster's Signature:</b>		<b>Date:</b>
<b>Official Stamp:</b>		

\* Delete whichever is not applicable

## Notes:

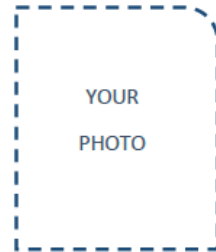
- (1) After deliberation by the head of engineering panel, the student must submit the original copy to the FYP Coordinator.
- (2) The student should make a duplicate copy and attach it in the logbook.

Application To Use Laboratory And Equipment Form

FKAASLaboratory/A1Form/v1/2019/September



LABORATORIES OF  
FACULTY OF CIVIL AND ENVIRONMENTAL ENGINEERING



**A1 FORM: COMPLIANCE TO THE RULE AND SAFETY TO WORK IN THE LABORATORY**

Please  the checklist below)

Student of: ( ) Diploma ( ) Degree ( ) Master ( ) PhD

**Student should:**

1. Provide a complete A2 form 'Application to use laboratory, material and equipment'
2. If you are working with chemical / microbes/material contained microbes, please attached the copy of 'Chemical and Biological Hazard Prevention' sticker
3. Attach the following item (a-c)<sup>1, 2</sup> with A2 form 'Application to use laboratory and equipment' during the form submission to obtain the confirmation, permission and approval from the laboratory Supervisor<sup>3</sup> or Science Officer and Assistant Laboratory Manager
  - a) Experiment procedure / SOP
  - b) Safety data sheet (SDS) for the chemical / microbes as stated in experiment procedure/SOP
  - c) Personal Protection Equipment (PPE) as stated in the SDS/experiment procedure/SOP
  - d) Disposal Method
4. Read , understand and obey the laboratory regulations
5. Use appropriate laboratory attire and PPE in the laboratory
6. Record the attendance in the laboratory user log book (each time)
7. Record the use of equipment in the equipment log book (each time)
8. Ensure that the equipment is under your control and take action on the safety of your self-features, equipment and laboratory
9. Return the equipment/apparatus used in good condition and clean
10. Report on any loss or damage that occur on any equipment you used  
Note: Any damage or loss of the equipment during your experiments, it is your responsibility to replace it
11. Experiments shall be carried out ONLY during working hours (Undergraduate/Postgraduate)and postgraduate students are not allowed when the studies and learning are in progress
12. No experiment when teaching and learning activity/ audit is in progress

<sup>1</sup>Compulsory for Wastewater Engineering Laboratory, Environmental Engineering Laboratory, MPRC

<sup>2</sup> Consult the Assistant Engineer /Assistant Laboratory Manager (except for Wastewater Engineering Laboratory, Environmental Engineering Laboratory, MPRC)

<sup>3</sup>Laboratory Supervisor is formerly known as Assistant Engineer

**DECLARATION BY STUDENT**

I will comply with the laboratory regulations that has been set, if it fails, I will accept all actions that will be taken by the laboratory committee on me

(Student Signature)  
Name:  
Matric No:  
HP Number:

Date :





FACULTY OF CIVIL AND ENVIRONMENTAL ENGINEERING

**A2 FORM: APPLICATION TO USE LABORATORY, MATERIAL AND EQUIPMENT**

1. Meet and discuss with the Laboratory Supervisor /Science Officers to confirm the availability of the laboratory, material and equipment and specify the date and time to use laboratory, material and equipment
2. Get the endorsement by supervisor ( signature and stamp)
3. Get the approval) from Laboratory Supervisor/ Science Officer (signature & stamp)
4. Get approval from Assistant Laboratory Manager ( signature and stamp)

NOTE: Students from other Faculties, 1) provide the application letter (with support by supervisor), 2) get the approval from the Dean of Faculty of Civil and Environmental Engineering, 3) attached the letter together with forms (A1 and A2).

PART I: STUDENT AND PROJECT DETAILS				
Name :		Faculty :		
Matric No:	HP:			
Project Title:		Level of Study (Please √)		
		<input type="checkbox"/> Diploma <input type="checkbox"/> Degree <input type="checkbox"/> Master <input type="checkbox"/> PhD		
Supervisor's name :		Supervisor's HP:		
PART II: LABORATORY, MATERIAL AND EQUIPMENT DETAIL				
Name of Laboratory:				
A	It is <b>COMPULSORY</b> to discuss with the Assistant Engineer/ Science Officer, specify the date and time you will use the Laboratory			
	No	Date	Time	Remark
	1			
Specify the Equipment that you will be using or borrowing:				
B	No	Equipment	Unit	Duration of use
	1			
	2			
Specify the chemicals/material that you will be using or borrowing. * please √ if the SDS is attached				
C	No	Chemical/material	SDS*	Duration of use
	1			
	2			
Note :Provide a new sheet to list A, B and C ( if the list too long)				
PART III: DECLARATION BY STUDENT		ENDORSEMENT BY SUPERVISOR		
I, _____ hereby agree to comply with all rules specified by the abovementioned Laboratory in using its space and facilities. I also agree to take good care of the abovementioned Material/ Equipment that I use or borrow. I will take full responsibility for any loss or damage. If I fail to comply to the rules, the Assistant Laboratory Manager or Assistant Engineer has the right to revoke the permission granted for using the Laboratory, Material and/or Equipment  Student's Signature Matric No: HP Number: Date:		I hereby agree that the student will be required to use the abovementioned Laboratory, Material and/or Equipment to fulfil the needs of his/her Project.  Signature: Official Stamp:  Date:		

PART IV: CHECKING BY LABORATORY SUPERVISOR/ SCIENCE OFFICER	DELIBERATION BY ASSISTANT LABORATORY MANAGER / HEAD OF RESEARCH CENTRE
<p>I hereby certified that</p> <p>This student has completed the checklist in Form A 1 <input type="checkbox"/></p> <p>The material/equipment required are available <input type="checkbox"/></p> <p>The specify date and time is available and booked <input type="checkbox"/></p> <p>Signature: Official Stamp:</p> <p>Date:</p>	<p>I hereby *approve / reject this application to use the Laboratory and Equipment specified above.</p> <p>Signature: Official Stamp:</p> <p>Date:</p>
PART V : DECLARATION AFTER COMPLETED THE PROJECT	
<p>I _____</p> <p>matric no. _____ had</p> <ol style="list-style-type: none"> <li>1 Take out the sample from the chiller, cold room or designated area</li> <li>2 Cleaned the space in chiller, cold room or designated area</li> <li>3 Disposed the sample(s) by following the appropriate method</li> <li>4 Placed the waste at the designated area</li> <li>5 Filled the laboratory logbooks</li> </ol> <p>Student's Signature Date:</p> <p>HP Number: Matric No:</p>	
PART VI : REMARKED BY ASSISTANT ENGINEER	
<p>Signature: Official Stamp:</p> <p>Date:</p>	
ENDORSEMENT BY SUPERVISOR	CHECKED BY ASSISTANT LABORATORY MANAGER / HEAD OF RESEARCH CENTRE
<p>Thank you for the information. Student(s) under my supervision will be informed to obey the laboratory rules and regulation.</p> <p>Signature: Official Stamp:</p> <p>Date:</p>	<p>Signature: Official Stamp:</p> <p>Date:</p>

**Technical Paper Format**

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**Article Title: Article Subtitles****First Author<sup>1</sup>, Second Author<sup>2,\*</sup>, Other Co-authors<sup>1</sup>**

<sup>1</sup>First Author Affiliation,  
Organization Address, City, Postcode, COUNTRY

<sup>2</sup>Second Author Affiliation,  
Organization Address, City, Postcode, COUNTRY

\*Corresponding Author Designation

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**Abstract:** First abstract sentence introduces the research background information and the problem statement. The second sentence explains the main research objectives and their scopes of study. The third sentence describes the materials, methods, and standard procedures used to conduct the study. The fourth sentence presents key findings and trends that can be observed from the data. The fifth sentence summarizes the discussion regarding those findings and some suggestions for future work.

**Keywords:** Keyword 1, Keyword 2, Other Keywords

**1. Introduction**

The determination of the existing structure conditions and predicts past and future conditions of the structure are very important. After the construction has been complete, the evaluation of the performance must be done periodically to detect any defects or failure that occurs on the structure. One of the most common and popular test carried out on concrete is the compression test. Concrete compressive strength being used so often because of the concrete characteristic is directly related to strength from the design point of view. In designs, concrete is mostly used under compression loading, since its tensile strength is low. Other than compression test, the compressive strength of the hardened concrete also can be determined using the non-destructive testing (NDT) methods. The rebound (Schmidt) hammer and Ultrasonic Pulse Velocity are the most popular of NDT methods used to determine the strength of concrete. This is due to their relatively low cost and simplicity in handling the test.

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Although the non-destructive testing (NDT) results are much quicker compared to the destructive methods, they are more of an approximation than exact compressive strength values<sup>1</sup> In as much as the rebound hammer results are quicker and do not destroy the surface of concrete tested, there is no established relationship between the compressive strength obtained using NDT and DT.

The aim of this research is to compare concrete compressive strength measured using destructive method and those measured using the NDT and established the correlation between these two methods. Conducting the NDT test will cause minor damage to the structure but do not affect their performance and appearance. An important feature of NDT is that they permit retesting at the same or nearly location

## **2. Assessment of Concrete Structure**

Non-destructive testing (NDT) is the quality control methods of inspecting, testing, or evaluating materials, components or assemblies for discontinuities, or differences in characteristics without doing harming the serviceability of the part or structure and are enable the repetitions of the test in the same sample at different times. In other words, when the inspection or test is completed the concrete structure can still be used. The test of the concrete structures need to be carried out after the concrete has hardened to find out whether the structure is suitable for its designed use<sup>3</sup>. Basically, the discontinuities and differences in material characteristics are more effectively found by using non-destructive test.

Increasing the use of modern non-destructive test plays a crucial role in ensuring the integrity and reliability of material, control manufacturing processes, lower production costs and to maintain a uniform quality level. Unfortunately, it is valuable only as a qualitative tool since it measures the relative surface hardness of the concrete<sup>4</sup>. The good thing about the non-destructive test is it can be applied to old and new structure. Usually, the testing of existing or old structures is related to make an assessment of structural integrity or adequacy. Meanwhile, the principal applications for new construction are likely to be for quality control or the resolution of doubts about the quality of materials or construction. There are typical examples are found in bridges, highways buildings and oil platforms which are all inspected using NDT.

## **3. Materials and Methods**

The materials and methods section, otherwise known as methodology, describes all the necessary information that is required to obtain the results of the study.

### **3.1 Materials**

Specifications and properties of materials, equipment, and other resources used in the current study should be described in this section. Should a bulleted list be required, it may be included and should look like this:

- First point
- Second point
- And so on

Lists using items marked with a,b,c, or i, ii, iii, and so on can also be considered. Items in the list should be indented similar to paragraph indentation.

### 3.2 Methods

Procedures can be described using flowcharts and algorithms, in which case the chart will be considered as a figure (see section 3.4). Include the appropriate references to standards. Authors can also explain the scope and limitations of the methods.

### 3.3 Equations

Equations and formulae should be typed in equation editors such as Math type. Equations should not be presented in the form of an image. Equations should be numbered based on the section number as the following:

$$f(x) = a_0 + \sum_{n=1}^{\infty} \left( a_n \cos \cos \frac{n\pi x}{L} + b_n \sin \sin \frac{n\pi x}{L} \right) \text{Eq. 1}$$

Each numbered equation should be in its line and be separated from the surrounding text by the default line spacing Eq. 1, as are all equations, should be referenced in the text.

## 4. Results and Discussion

The results and discussion section presents data and analysis of the study. This section can be organized based on the stated objectives, the chronological timeline, different case groupings, different experimental configurations, or any logical order as deemed appropriate.

### 4.1 Results

Result scan be presented in the form of tables, figures, charts, diagrams or other suitable formats. If required, raw data that is too lengthy to be put in this section can be moved to the appendix.

### 4.2 Discussions

Accompanying discussions that further explain observations of the results are usually placed immediately below the results paragraph.

### 4.3 Tables

Tables should be numbered based on the section number and formatted based on the style as presented in the following:

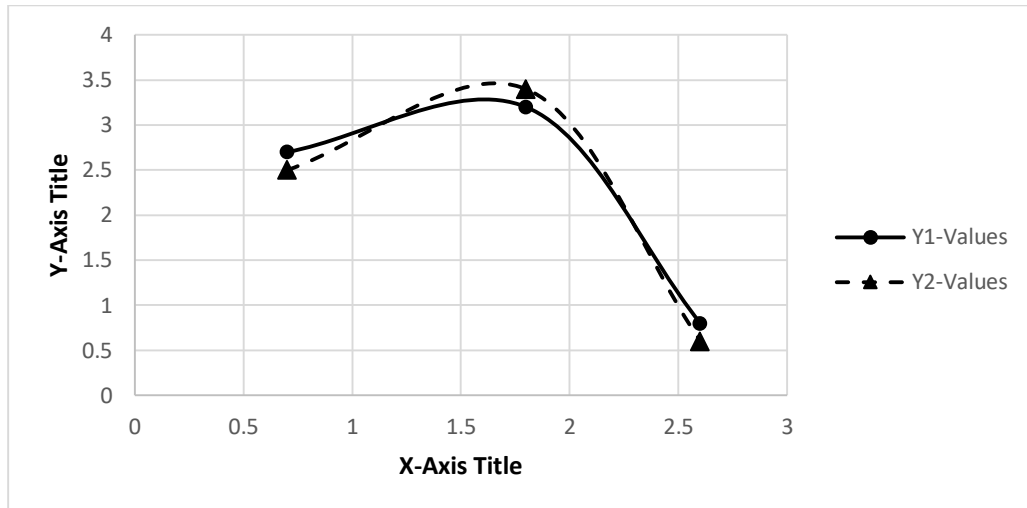
**Table 1: Example of presenting data using a table**

Item	Parameter Name	Variable Value	Unit or Dimension
1	Data Point 1	0.001	Kilograms (kg)
2	Data Point 2	1.000	kg·m/s <sup>2</sup>
3	Data Point 3	1.0 x 10 <sup>4</sup>	psi
4	Data Point 4	-1.0 x 10 <sup>-4</sup>	Dimensionless

Table 1, as are all tables, should be referenced in the text. Items in the table can be aligned to the cell-centre, the right, or the left whenever appropriate. All tables must have a caption that is aligned left. Only horizontal lines should be used within a table, to distinguish the column headings from the body of the table, and immediately above and below the table. Tables must be embedded in the text and not supplied separately.

#### 4.4 Figures

Figures should be numbered based on the section number and formatted based on the style as presented in the following:



**Figure 1: Example of presenting data using a figure**

Figure 1, as are all figures, should be referenced in the text. Figures should be placed at the top or bottom of a page wherever possible, as close as possible to the first reference to them in the paper. Please ensure that all the figures are of 300 DPI resolutions as this will facilitate good output. The preferred format of figures is PNG, JPEG, GIF etc. Items in the figure should be aligned to the centre whenever applicable. Figure caption is aligned to the centre. All writings, symbols, and data markers in the figure should be legible and discernible, even in black-and-white. If a figure is copyrighted by a third party, the authors bear the responsibility to obtain licensing or permission to use the figure in the paper. In this case, proper citation is required to be added in the figure caption.

#### 5. Conclusion

The conclusion should summarize the main findings of the study, and restate the key points inferred from trends observed and discussed regarding the data. Some suggestions should be included to encourage the continuation of the current research.

#### Acknowledgement

This research was made possible by funding from research grant number ABC-XXXX provided by the Ministry of Higher Education, Malaysia. The authors would also like to thank the Faculty of Mechanical and Manufacturing Engineering, Universiti Tun Hussein Onn Malaysia for its support.

#### Appendix A (Optional)

Any extra data, equations or information that is beneficial to the discussion of the paper should be included here. More appendices can be added as deemed necessary.

## References

- [1] B. Klaus and P. Horn, Robot Vision. Cambridge, MA: MIT Press, 1986. (Example citation for books)
- [2] L. Stein, "Random patterns," in Computers and You, J. S. Brake, Ed. New York: Wiley, 1994, pp. 55-70. (Example for a chapter in a book)
- [3] L. Bass, P. Clements, and R. Kazman, Software Architecture in Practice, 2nd ed. Reading, MA: Addison Wesley, 2003. [E-book] Available: Safari e-book. (Example for e-books)
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- [11] J. Riley, "Call for a new look at skilled migrants," The Australian, p. 35, May 31, 2005. [Online]. Available: Factiva, <http://global.factiva.com>. [Accessed May 31, 2005]. (Example for newspaper article)
- [12] J. H. Davis and J. R. Cogdell, "Calibration program for the 16-foot antenna," Elect. Eng. Res. Lab., Univ. Texas, Austin, Tech. Memo. NGL-006-69-3, Nov. 15, 1987. (Example for technical report)
- [13] J. P. Wilkinson, "Nonlinear resonant circuit devices," U.S. Patent 3 624 125, July 16, 1990. (Example for a patent)
- [14] IEEE Criteria for Class IE Electric Systems, IEEE Standard 308, 1969. (Example for a standard)
- [15] J. O. Williams, "Narrow-band analyzer," PhD dissertation, Dept. Elect. Eng., Harvard Univ., Cambridge, MA, 1993. (Example for a thesis)

## Submission of FYP Final Report



Faculty of Civil Engineering and Built Environment  
Universiti Tun Hussein Onn Malaysia

FINAL YEAR PROJECT  
SUBMISSION OF FYP FINAL REPORT

PART I: STUDENT DETAILS AND DECLARATION	
Student's Name:	
NRIC No.:	Matric Card No.:
FYP Title:	
<p>I hereby declare that I have adhered to the guidelines for the preparation and submission of my FYP Final Report. Herewith, I am submitting;</p> <p><input type="checkbox"/> softcopy (pdf format) through Ereport UTHM Repository (ereport ID no :_____).</p> <p><input type="checkbox"/> softcopy (pdf format) <b>Final Year Project Report</b> and <b>Turn-it-in Report</b> through <b>AUTHOR System</b></p> <p>as required by the Faculty of Civil Engineering and Built Environment.</p> <p><b>Student's Signature:</b> _____ <b>Date of Submission:</b> _____</p>	
PART II: CERTIFICATION BY SUPERVISOR	
<p><input type="checkbox"/> I hereby certify that the student above has adhered to the guidelines for the preparation of his/her FYP Report with the similarity index less than 30%. Hence, the student may submit his/her FYP Report to the Faculty of Civil Engineering and Built Environment.</p> <p><input type="checkbox"/> I have verified and submitted the student's softcopy trough EReport UTHM Repository.</p> <p><b>Supervisor's Signature:</b> _____ <b>Date:</b> _____</p> <p><b>Official Stamp:</b> _____</p>	
PART III: APPROVAL BY FYP COMMITTEE	
<p>I hereby acknowledge that the student's softcopy has been uploaded in EReport UTHM Repository and AUTHOR System.</p> <p><b>FYP Committee's Signature:</b> _____ <b>Date:</b> _____</p> <p><b>Official Stamp:</b> _____</p>	



**FOR OFFICE USE ONLY**

It is hereby certified that the Office of the Faculty of Civil Engineering and Built Environment has received this form of the above student's FYP Report and similarity turn-it-it report.

**Date Received:**

**Office Stamp:**

**Signature:**

## FYP 1 Assessment Forms



Faculty of Civil Engineering and Built Environment  
Universiti Tun Hussein Onn Malaysia

**FYP 1**

**FINAL YEAR PROJECT 1  
EXAMINATION PANEL ASSESSMENT FORM**

This is a confidential document for use by the FYP Examination Panel. Assessment should be done in discretion.

<b>PART I: STUDENT DETAILS</b>	
<b>Student's Name:</b>	<b>Matric Card No.:</b>
<b>Final Year Project 1 Title:</b>	

<b>PART II: PRESENTATION ASSESSMENT (15%)</b>							
<b>Performance Criteria</b>	<b>Weight-age</b>	<b>Engineering Activities (EA)</b>	<b>Description of Performance Criteria</b>				
			<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>EX01: Presentation organisation</b>	0.8	<b>Marks</b>	The presentation organisation is lackey prepared with little or no relevant citing references.	The presentation organisation is minimally prepared and include less relevant citing references.	The presentation organisation is moderately prepared and include enough relevant citing references.	The presentation organisation is well-prepared and include good relevant citing references.	The presentation organisation is exceptionally well-prepared and include substantial relevant citing references.

		Able to present and deliver materials as described in descriptor.					
		Marks	1	2	3	4	5
<b>EX02: Presentation content and material</b>	1.2	EA3 – Innovation  Involve creative use of engineering principles and research-based knowledge in novel.	Unable to present the content of the research	Lack of presentation content of the research with unsystematic manner	Able to present some of the content of the research in systematic manner	Able to present most of the content of the research in systematic manner	Able to clearly present every content of the research in organised and systematic manner
		Able to create good output based on the various materials.					
		Marks	1	2	3	4	5
<b>EX03: Creation</b>  <i>Material has a value of creation (eg. contribute to community or humanity)</i>	0.5	EA1 – Range of resources  Involve the use of diverse resources (and for this purpose resources includes people, money, equipment, materials, information and technologist)	Poor design resources with no creativity	Lack design resources with minimum creativity	Moderate design with adequate resources and some creativity	Good design with several resources and substantial creativity	Excellent design with diverse resources and high creativity
		Marks	1	2	3	4	5
<b>EX04: Discussion- Question and answer</b>	0.5		Unable to respond and answer	Able to respond and answer without relevancy and with hesitation	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 very well with high relevancy (with justification) and highly confidence.

PART III : PROJECT PROPOSAL ASSESSMENT (30%)							
Performance Criteria	Weight-age	Complex Problem (WP)	Description of Performance Criteria				
			Able to provide good introduction based on the knowledge profile WK4 and WK7				
		<b>Marks</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>EX05: Abstract</b>	0.8	WP1: Depth of knowledge WK4: Familiarity of Issues WK7: Comprehension	The abstract is very badly written	The abstract is badly written	The abstract is slightly flawed	The abstract is written well, and rather concise and comprehensive	The abstract is exceptionally well-written, concise and comprehensive
			Able to provide good introduction based on the knowledge profile WK3, WK7 and WK8				
		<b>Marks</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>EX06: Introduction</b> (Background, problem statement, objectives, scope and limitation of work)	0.8	WP1: Depth of knowledge WP4: Familiarity of Issues WK3: Engineering Fundamentals WK7: Comprehension WK8: Research literature	The research background, statement of problem, aims, objectives, scope and importance are unsuccessfully stated	The research background, statement of problem, aims, objectives, scope and importance are vaguely stated	The research background, statement of problem, aims, objectives, scope and importance are satisfactory	The research background, statement of problem, aims, objectives, scope and importance are clearly stated	The research background, statement of problem, aims, objectives, scope and importance are exceptionally well stated
			Able to provide good literature review based on the knowledge profile WK8				
		<b>Marks</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>EX07: Literature Review</b>	1.4	WP2: Range of conflicting requirements WK8: Research literature	The supporting literature is completely irrelevant, and is reviewed very badly	The supporting literature is mostly irrelevant and is reviewed badly	The supporting literature is only slightly relevant and is reviewed inadequately	The supporting literature is relevant and is reviewed well	The supporting literature is very relevant and is reviewed critically

Performance Criteria	Weight-age	Complex Problem (WP)	Description of Performance Criteria				
			Able to provide good Methodology based on the knowledge profile WK4 and WK5				
		<b>Marks</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>EX08: Methodology</b>	1.2	WP5: Extent of applicable codes WK4: Specialist knowledge WK5: Engineering design	The proposed methods are completely wrong and are described very badly	The proposed methods are mostly not acceptable and are described badly	The proposed methods are partly acceptable and are described in general terms	The proposed methods are appropriate and are described in detail	The proposed methods are very appropriate and are described in great detail
			Able to provide good Expected Results based on the knowledge profile WK4				
		<b>Marks</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>EX09: Expected results</b>	0.5	WP3: Depth of analysis required WK4: Specialist knowledge	The expected results are not properly stated and highly inconsistent with the objectives	The expected results are vaguely stated and mostly not consistent with the objectives	The expected results are not clearly stated and not consistent with the objectives	The expected results are clearly stated and consistent with the objectives	The expected results are very clearly stated and very consistent with the objectives
		<b>Marks</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>EX10: References</b>	0.5		The sources of reference are highly unreliable and citations are very inconsistent with the list of references	The sources of reference are not reliable and most citations are not consistent with the list of references	The sources of reference are questionable and some citations are not consistent with the list of references	The sources of reference are reliable and citations are consistent with the list of references	The sources of reference are very reliable and citations are very consistent with the list of references
		<b>Marks</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>EX11: Writing skills (format, Gantt Chart)</b>	0.5		The writing skills and project planning are very badly-prepared and highly inappropriate	The writing skills and project planning are badly-prepared and not appropriate	The writing skills and project planning has some flaws and are rather inappropriate	The writing skills and project planning are well-prepared and appropriate	The writing skills and project planning are exceptionally well-prepared and appropriate

**PART IV: CERTIFICATION BY EXAMINER**

**Comments** (if any):

1. The candidate can proceed to FYP 2. **YES / NO**  
If no, please explain. ***(Please return this form to FYP Coordinator)***

2. The candidate needs to revise and resubmit the proposal for re-examination. **YES / NO**  
If yes, please explain. ***(Please return this form to FYP Coordinator)***

**Examiner's Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Examiner's Name:** \_\_\_\_\_

Note: (1) This form must be completed and kept for documentation purposes.  
(3) The examiner must submit these marks via FYP Online (<http://tcis.uthm.edu.my>)



**FINAL YEAR PROJECT 1  
SUPERVISOR ASSESSMENT FORM**

This is a confidential document for use by the FYP Examination Panel. Assessment should be done in discretion.

<b>PART I: STUDENT DETAILS</b>	
<b>Student's Name:</b>	<b>Matric Card No.:</b>
<b>Final Year Project 1 Title:</b>	

<b>PART II: SOFTSKILLS ASSESSMENT (20%)</b>						
<b>Performance Criteria</b>	<b>Weightage</b>	<b>Description of Performance Criteria</b>				
	<b>Marks</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>SV01: Meeting with supervisor</b>	1.0	Meetings very seldom and without preparation and unable to discuss the progress	Meetings seldom with supervisor with some preparations and discuss the progress	Meeting once in a while with supervisor with preparation of discussion on progress	Meeting regularly with supervisor with well preparation and moderate quality of discussion on progress	Meeting frequently with supervisor with well preparation and high quality discussion
<b>SV02: Attitude</b>	1.0	Shows no interest in the project. Has major issues with completing tasks, shows no signs of inquisitiveness and is highly dependent on the supervisor.	Shows little interest in the project and lacks commitment. Has issues with completing tasks, lacks inquisitiveness and is dependent on the supervisor most of the time.	Shows some interest in the project but is not fully committed. Moderately hardworking, lacks inquisitiveness and is dependent on the supervisor half of the time.	Shows an interest in the project and is hardworking, inquisitive and independent	Shows a genuine interest in the project and is exceptionally hardworking, inquisitive and independent.

Performance Criteria	Weightage	Description of Performance Criteria				
		1	2	3	4	5
<b>SV03: Project planning and implementation chart</b>	1.0	Project plan is seriously flawed.	Project plan is flawed and needs to be more systematic and appropriate.	Project plan needs improvement and should be more systematic and appropriate.	Project plan is well prepared, systematic and appropriate.	Project plan is exceptionally well prepared, systematic and appropriate.
<b>SV04: Weekly activities</b>	1.0	Seldom does work and cannot adapt to changes	Work is not conducted according to plan and has major difficulty adapting to changes.	Work is not completely conducted according to plan and has some difficulty adapting to changes.	Most work is conducted according to plan and can adapt to changes.	Conducts work according to plan and adapts well to changes.

PART III : PROJECT PROPOSAL ASSESSMENT (35%)							
Performance Criteria	Weightage	Complex Problem (WP)	Description of Performance Criteria				
			1	2	3	4	5
			Able to provide good introduction based on the knowledge profile <b>WK4 and WK7</b>				
<b>SV05: Abstract</b>	0.8	WP1: Depth of knowledge WK4: Familiarity of Issues WK7: Comprehension	The abstract is very badly written.	The abstract is badly written.	The abstract is slightly flawed.	The abstract is written well, and rather concise and comprehensive	The abstract is exceptionally well-written, concise and comprehensive



Performance Criteria	Weightage	Complex Problem (WP)	Description of Performance Criteria				
			Able to provide good introduction based on the knowledge profile <b>WK3, WK7 and WK8</b>				
		<b>Marks</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>SV06: Introduction</b> (Background, problem statement, objectives, scope and limitation of work)	0.8	WP1: Depth of knowledge WP4: Familiarity of Issues WK3: Engineering Fundamentals WK7: Comprehension WK8: Research literature	The research background, statement of problem, aims, objectives, scope and importance are unsuccessfully stated	The research background, statement of problem, aims, objectives, scope and importance are vaguely stated	The research background, statement of problem, aims, objectives, scope and importance are satisfactory	The research background, statement of problem, aims, objectives, scope and importance are clearly stated	The research background, statement of problem, aims, objectives, scope and importance are exceptionally well stated
			Able to provide good literature review based on the knowledge profile <b>WK8</b>				
		<b>Marks</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>SV07: Literature Review</b>	1.5	WP2: Range of conflicting requirements WK8: Research literature	The supporting literature is completely irrelevant, and is reviewed very badly	The supporting literature is mostly irrelevant and is reviewed badly	The supporting literature is only slightly relevant and is reviewed inadequately	The supporting literature is relevant and is reviewed well	The supporting literature is very relevant and is reviewed critically
			Able to provide good Methodology based on the knowledge profile <b>WK4 and WK5</b>				
		<b>Marks</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>SV08: Methodology</b>	1.5	WP5: Extent of applicable codes WK4: Specialist knowledge WK5: Engineering design	The proposed methods are completely wrong and are described very badly	The proposed methods are mostly not acceptable and are described badly	The proposed methods are partly acceptable and are described in general terms	The proposed methods are appropriate and are described in detail	The proposed methods are very appropriate and are described in great detail

Performance Criteria	Weightage	Complex Problem (WP)	Description of Performance Criteria				
			Able to provide good Expected Results based on the knowledge profile <b>WK4</b>				
		Marks	1	2	3	4	5
<b>SV09: Expected results</b>	0.7	WP3: Depth of analysis required WK4: Specialist knowledge	The expected results are not properly stated and highly inconsistent with the objectives	The expected results are vaguely stated and mostly not consistent with the objectives	The expected results are not clearly stated and not consistent with the objectives	The expected results are clearly stated and consistent with the objectives	The expected results are very clearly stated and very consistent with the objectives
		Marks	1	2	3	4	5
<b>SV10: References</b>	0.7		The sources of reference are highly unreliable and citations are very inconsistent with the list of references	The sources of reference are not reliable and most citations are not consistent with the list of references	The sources of reference are questionable and some citations are not consistent with the list of references	The sources of reference are reliable and citations are consistent with the list of references	The sources of reference are very reliable and citations are very consistent with the list of references
		Marks	1	2	3	4	5
<b>SV11: Writing skills (format, Gant Chart)</b>	1.0		The writing skills and project planning are very badly-prepared and highly inappropriate	The writing skills and project planning are badly-prepared and not appropriate	The writing skills and project planning has some flaws and are rather inappropriate	The writing skills and project planning are well-prepared and appropriate	The writing skills and project planning are exceptionally well-prepared and appropriate
<b>PART IV: CERTIFICATION BY SUPERVISOR</b>							
<b>Comments</b> (if any):							
<b>Supervisor's Signature:</b>				<b>Date:</b>			

Note: (1) This form must be completed and kept for documentation purposes.  
(2) The supervisor must submit these marks via FYP Online (<http://tcis.uthm.edu.my>)

## FYP 2 Assessment Forms



Faculty of Civil Engineering and Built Environment  
Universiti Tun Hussein Onn Malaysia

**FYP 2**

**FINAL YEAR PROJECT 2  
EXAMINATION PANEL ASSESSMENT FORM**

This is a confidential document for use by the FYP Examination Panel. Assessment should be done in discretion.

<b>PART I: STUDENT DETAILS</b>	
<b>Student's Name:</b>	<b>Matric Card No.:</b>
<b>Final Year Project 2 Title:</b>	

<b>PART II: PRESENTATION ASSESSMENT (10%)</b>							
<b>Performance Criteria</b>	<b>Weightage</b>	<b>Engineering Activities (EA)</b>	<b>Description of Performance Criteria</b>				
			<b>Marks</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<b>EX01: Presentation organisation</b>	<b>0.5</b>		The presentation organisation is lackey prepared with little or no relevant citing references.	The presentation organisation is minimally prepared and include less relevant citing references.	The presentation organisation is moderately prepared and include enough relevant citing references.	The presentation organisation is well-prepared and include good relevant citing references.	The presentation organisation is exceptionally well-prepared and include substantial relevant citing references.

Performance Criteria	Weightage	Engineering Activities (EA)	Description of Performance Criteria				
			Able to present and deliver materials as described in descriptor.				
		Marks	1	2	3	4	5
<b>EX02: Presentation content and material</b>	<b>0.7</b>	EA2 – Level of interactions  Require resolutions of significant problems arising from interactions between ranging or conflicting technical, engineering or other issues	Unable to present the content of the research	Lack of presentation content of the research with unsystematic manner	Able to present some of the content of the research in systematic manner	Able to present most of the content of the research in systematic manner	Able to clearly present every content of the research in organised and systematic manner
		Marks	1	2	3	4	5
<b>EX03: Discussion-Question and answer</b>	<b>0.8</b>	EA4 – Consequences to society and the environment  Have significant consequences in range of context, characterised by difficulty of prediction and mitigation.	Unable to respond and answer	Able to respond and answer without relevancy and with hesitation	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 very well with high relevancy (with justification) and highly confidence.

PART III : PROJECT REPORT ASSESSMENT (25%)							
Performance Criteria	Weightage	Complex Problem (WP)	Description of Performance Criteria				
			Able to provide good abstract based on the knowledge profile <b>WK4</b> and <b>WK7</b>				
		<b>Marks</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>EX04: Abstract</b>	<b>0.4</b>	WP1: Depth of knowledge WK4: Familiarity of Issues  WK7: Comprehension	The abstract is very badly written	The abstract is badly written	The abstract is slightly flawed	The abstract is written well, and rather concise and comprehensive	The abstract is exceptionally well-written, concise and comprehensive
			Able to provide good introduction based on the knowledge profile <b>WK3</b> , <b>WK7</b> and <b>WK8</b>				
		<b>Marks</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>EX05: Introduction</b> (Background, problem statement, objectives, scope and limitation of work)	<b>0.4</b>	WP1: Depth of knowledge WP4: Familiarity of Issues WK3: Engineering Fundamentals WK7: Comprehension WK8: Research literature	The research background, statement of problem, aims, objectives, scope and importance are unsuccessfully stated	The research background, statement of problem, aims, objectives, scope and importance are vaguely stated	The research background, statement of problem, aims, objectives, scope and importance are satisfactory	The research background, statement of problem, aims, objectives, scope and importance are clearly stated	The research background, statement of problem, aims, objectives, scope and importance are exceptionally well stated
			Able to provide good literature review based on the knowledge profile <b>WK8</b>				
		<b>Marks</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>EX06: Literature Review</b>	<b>1.0</b>	WP2: Range of conflicting requirements WK8: Research literature	The supporting literature is completely irrelevant, and is reviewed very badly	The supporting literature is mostly irrelevant and is reviewed badly	The supporting literature is only slightly relevant and is reviewed inadequately	The supporting literature is relevant and is reviewed well	The supporting literature is very relevant and is reviewed critically

Performance Criteria	Weightage	Complex Problem (WP)	Description of Performance Criteria				
			Able to provide good Methodology based on the knowledge profile <b>WK4</b> and <b>WK5</b>				
		<b>Marks</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>EX07: Methodology</b>	<b>1.0</b>	WP5: Extent of applicable codes WK4: Specialist knowledge  WK5: Engineering design	The proposed methods are completely wrong and are described very badly	The proposed methods are mostly not acceptable and are described badly	The proposed methods are partly acceptable and are described in general terms	The proposed methods are appropriate and are described in detail	The proposed methods are very appropriate and are described in great detail
			Able to provide good Expected Results based on the knowledge profile <b>WK4</b>				
		<b>Marks</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>EX08: Result and Discussion</b>	<b>1.2</b>	WP3: Depth of analysis required WK4: Specialist knowledge	The results are reported and interpreted very ineffectively, and there are no discussions.	The results are reported and interpreted ineffectively, and there are insignificant or no discussions provided	The results are reported and interpreted rather ineffectively, and the discussions lack insightfulness	The results are reported and interpreted effectively, and the discussions are insightful	The results are reported and interpreted very effectively, and the discussions are very insightful
		<b>Marks</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>EX09: Conclusion and Recommendation</b>	<b>0.4</b>		The conclusions are weak and do not include significance and limitations of current work, and recommendations for future work	The conclusions do not identify the key findings and do not include the significance and limitations of current work, and recommendations for future work	The conclusions do not clearly identify the key findings and do not mention the significance and limitations of current work, or recommendations for future work	The conclusions clearly identify the key findings and include significance and limitations of current work, and recommendations for future work	The conclusions very clearly identify the key findings and include significance and limitations of current work, and recommendations for future work

Performance Criteria	Weightage	Complex Problem (WP)	Description of Performance Criteria				
			Marks	1	2	3	4
<b>EX010: References</b>	<b>0.3</b>		The sources of reference are highly unreliable and citations are very inconsistent with the list of references	The sources of reference are not reliable and most citations are not consistent with the list of references	The sources of reference are questionable and some citations are not consistent with the list of references	The sources of reference are reliable and citations are consistent with the list of references	The sources of reference are very reliable and citations are very consistent with the list of references
		<b>Marks</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>EX11: Writing skills (Format)</b>	<b>0.3</b>		The writing skills and project planning are very badly-prepared and highly inappropriate	The writing skills and project planning are badly-prepared and not appropriate	The writing skills and project planning has some flaws and are rather inappropriate	The writing skills and project planning are well-prepared and appropriate	The writing skills and project planning are exceptionally well-prepared and appropriate

PART IV: TECHNICAL PAPER ASSESSMENT (10%)							
Performance Criteria	Weightage	Complex Problem (WP)	Description of Performance Criteria				
			Marks	1	2	3	4
			Able to provide good abstract based on the knowledge profile <b>WK4</b> and <b>WK7</b>				
<b>EX12: Abstract</b>	<b>0.3</b>	WP1: Depth of knowledge WK4: Familiarity of Issues WK7: Comprehension	The abstract is very badly written	The abstract is badly written	The abstract is slightly flawed	The abstract is written well, and rather concise and comprehensive	The abstract is exceptionally well-written, concise and comprehensive

Performance Criteria	Weightage	Complex Problem (WP)	Description of Performance Criteria				
			Able to provide good introduction based on the knowledge profile <b>WK3, WK7 and WK8</b>				
		<b>Marks</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>EX13: Introduction</b>	<b>0.3</b>	WP1: Depth of knowledge WP4: Familiarity of Issues WK3: Engineering Fundamentals WK7: Comprehension WK8: Research literature	The research background, statement of problem, aims, objectives, scope and importance are unsuccessfully stated	The research background, statement of problem, aims, objectives, scope and importance are vaguely stated	The research background, statement of problem, aims, objectives, scope and importance are satisfactory	The research background, statement of problem, aims, objectives, scope and importance are clearly stated	The research background, statement of problem, aims, objectives, scope and importance are exceptionally well stated
			Able to provide good Materials and Methods based on the knowledge profile <b>WK4 &amp; WK5</b>				
		<b>Marks</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>EX14: Materials and Methods</b>	<b>0.4</b>	WP2: Range of conflicting requirements	The proposed methods are completely wrong and are described very badly	The proposed methods are mostly not acceptable and are described badly	The proposed methods are partly acceptable and are described in general terms	The proposed methods are appropriate and are described in detail	The proposed methods are very appropriate and are described in great detail
			Able to provide good Results and Discussion based on the knowledge profile <b>WK4</b>				
		<b>Marks</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>EX15: Result and Discussion</b>	<b>0.5</b>	WP3: Depth of analysis required WK4: Specialist knowledge	The results are reported and interpreted very ineffectively, and there are no discussions.	The results are reported and interpreted ineffectively, and there are insignificant or no discussions provided	The results are reported and interpreted rather ineffectively, and the discussions lack insightfulness	The results are reported and interpreted effectively, and the discussions are insightful	The results are reported and interpreted very effectively, and the discussions are very insightful



Performance Criteria	Weightage	Complex Problem (WP)	Description of Performance Criteria				
			Marks	1	2	3	4
<b>EX16: Conclusion</b>	<b>0.3</b>		The conclusions are weak and do not include significance and limitations of current work, and recommendations for future work	The conclusions do not identify the key findings and do not include the significance and limitations of current work, and recommendations for future work	The conclusions do not clearly identify the key findings and do not mention the significance and limitations of current work, or recommendations for future work	The conclusions clearly identify the key findings and include significance and limitations of current work, and recommendations for future work	The conclusions very clearly identify the key findings and include significance and limitations of current work, and recommendations for future work
		<b>Marks</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>EX17: References</b>	<b>0.2</b>		The sources of reference are highly unreliable and citations are very inconsistent with the list of references	The sources of reference are not reliable and most citations are not consistent with the list of references	The sources of reference are questionable and some citations are not consistent with the list of references	The sources of reference are reliable and citations are consistent with the list of references	The sources of reference are very reliable and citations are very consistent with the list of references

**PART V: CERTIFICATION BY EXAMINER**

**Comments** (if any):

1. The candidate can pass FYP 2. **YES / NO**  
If **NO**, please explain. *(Please return this form to FYP Coordinator)*

2. The candidate needs to revise and resubmit the thesis for re-examination. **YES / NO**  
If **YES**, please explain. *(Please return this form to FYP Coordinator)*

**Examiner's Signature:**

**Date:**

**Examiner's Name:**

Note: (1) This form must be completed and kept for documentation purposes.  
(2) The examiner must submit these marks via FYP Online (<http://tcis.uthm.edu.my>)



**FINAL YEAR PROJECT 2  
SUPERVISOR ASSESSMENT FORM**

This is a confidential document for use by the FYP Examination Panel. Assessment should be done in discretion.

<b>PART I: STUDENT DETAILS</b>	
<b>Student's Name:</b>	<b>Matric Card No.:</b>
<b>Final Year Project 2 Title:</b>	

<b>PART II: SOFT SKILLS ASSESSMENT (15%)</b>						
<b>Performance Criteria</b>	<b>Weightage</b>	<b>Description of Performance Criteria</b>				
	<b>Marks</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>SV01: Meeting with supervisor</b>	<b>1.0</b>	Meetings very seldom and without preparation and unable to discuss the progress	Meetings seldom with supervisor with some preparations and discuss the progress	Meeting once in a while with supervisor with preparation of discussion on progress	Meeting regularly with supervisor with well preparation and moderate quality of discussion on progress	Meeting frequently with supervisor with well preparation and high quality discussion
<b>SV02: Attitude</b>	<b>0.5</b>	Shows no interest in the project. Has major issues with completing tasks, shows no signs of inquisitiveness and is highly dependent on the supervisor.	Shows little interest in the project and lacks commitment. Has issues with completing tasks, lacks inquisitiveness and is dependent on the supervisor most of the time.	Shows some interest in the project but is not fully committed. Moderately hardworking, lacks inquisitiveness and is dependent on the supervisor half of the time.	Shows an interest in the project and is hardworking, inquisitive and independent	Shows a genuine interest in the project and is exceptionally hardworking, inquisitive and independent.

Performance Criteria	Weightage	Description of Performance Criteria				
		Marks	1	2	3	4
<b>SV03: Project planning and implementation chart</b>	<b>0.5</b>	Project plan is seriously flawed.	Project plan is flawed and needs to be more systematic and appropriate.	Project plan needs improvement and should be more systematic and appropriate.	Project plan is well prepared, systematic and appropriate.	Project plan is exceptionally well prepared, systematic and appropriate.
<b>SV04: Weekly activities</b>	<b>1.0</b>	Seldom does work and cannot adapt to changes	Work is not conducted according to plan and has major difficulty adapting to changes.	Work is not completely conducted according to plan and has some difficulty adapting to changes.	Most work is conducted according to plan and can adapt to changes.	Conducts work according to plan and adapts well to changes.

<b>PART III : PROJECT REPORT ASSESSMENT (30%)</b>							
Performance Criteria	Weightage	Complex Problem (WP)	Description of Performance Criteria				
			Marks	1	2	3	4
			Able to provide good abstract based on the knowledge profile <b>WK4</b> and <b>WK7</b>				
<b>SV05: Abstract</b>	<b>0.5</b>	WP1: Depth of knowledge WK4: Familiarity of Issues  WK7: Comprehension	The abstract is very badly written	The abstract is badly written	The abstract is slightly flawed	The abstract is written well, and rather concise and comprehensive	The abstract is exceptionally well-written, concise and comprehensive

Performance Criteria	Weightage	Complex Problem (WP)	Description of Performance Criteria				
			Able to provide good introduction based on the knowledge profile <b>WK3, WK7 and WK8</b>				
		<b>Marks</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>SV06: Introduction</b>	<b>0.5</b>	WP1: Depth of knowledge WP4: Familiarity of Issues WK3: Engineering Fundamentals WK7: Comprehension WK8: Research literature	The research background, statement of problem, aims, objectives, scope and importance are unsuccessfully stated	The research background, statement of problem, aims, objectives, scope and importance are vaguely stated	The research background, statement of problem, aims, objectives, scope and importance are satisfactory	The research background, statement of problem, aims, objectives, scope and importance are clearly stated	The research background, statement of problem, aims, objectives, scope and importance are exceptionally well stated
			Able to provide good literature review based on the knowledge profile <b>WK8</b>				
		<b>Marks</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>SV07: Literature Review</b>	<b>1.2</b>	WP2: Range of conflicting requirements WK8: Research literature	The supporting literature is completely irrelevant, and is reviewed very badly	The supporting literature is mostly irrelevant and is reviewed badly	The supporting literature is only slightly relevant and is reviewed inadequately	The supporting literature is relevant and is reviewed well	The supporting literature is very relevant and is reviewed critically
			Able to provide good Methodology based on the knowledge profile <b>WK4 and WK5</b>				
		<b>Marks</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>SV08: Methodology</b>	<b>1.2</b>	WP5: Extent of applicable codes WK4: Specialist knowledge WK5: Engineering design	The proposed methods are completely wrong and are described very badly	The proposed methods are mostly not acceptable and are described badly	The proposed methods are partly acceptable and are described in general terms	The proposed methods are appropriate and are described in detail	The proposed methods are very appropriate and are described in great detail

Performance Criteria	Weightage	Complex Problem (WP)	Description of Performance Criteria				
			Able to provide good Expected Results based on the knowledge profile WK4				
		<b>Marks</b>	1	2	3	4	5
<b>SV09: Results and Discussion</b>	<b>1.5</b>	WP3: Depth of analysis required WK4: Specialist knowledge	The expected results are not properly stated and highly inconsistent with the objectives	The expected results are vaguely stated and mostly not consistent with the objectives	The expected results are not clearly stated and not consistent with the objectives	The expected results are clearly stated and consistent with the objectives	The expected results are very clearly stated and very consistent with the objectives
		<b>Marks</b>	1	2	3	4	5
<b>SV10: Conclusion and Recommendation</b>	<b>0.5</b>		The conclusions are weak and do not include significance and limitations of current work, and recommendations for future work	The conclusions do not identify the key findings and do not include the significance and limitations of current work, and recommendations for future work	The conclusions do not clearly identify the key findings and do not mention the significance and limitations of current work, or recommendations for future work	The conclusions clearly identify the key findings and include significance and limitations of current work, and recommendations for future work	The conclusions very clearly identify the key findings and include significance and limitations of current work, and recommendations for future work
		<b>Marks</b>	1	2	3	4	5
<b>SV11: References</b>	<b>0.3</b>		The sources of reference are highly unreliable and citations are very inconsistent with the list of references	The sources of reference are not reliable and most citations are not consistent with the list of references	The sources of reference are questionable and some citations are not consistent with the list of references	The sources of reference are reliable and citations are consistent with the list of references	The sources of reference are very reliable and citations are very consistent with the list of references

Performance Criteria	Weightage	Complex Problem (WP)	Description of Performance Criteria				
			Marks	1	2	3	4
<b>SV12: Writing skills (Format)</b>	<b>0.3</b>		The writing skills and project planning are very badly-prepared and highly inappropriate	The writing skills and project planning are badly-prepared and not appropriate	The writing skills and project planning has some flaws and are rather inappropriate	The writing skills and project planning are well-prepared and appropriate	The writing skills and project planning are exceptionally well-prepared and appropriate

PART IV: TECHNICAL PAPER ASSESSMENT (10%)							
Performance Criteria	Weightage	Complex Problem (WP)	Description of Performance Criteria				
			Marks	1	2	3	4
			Able to provide good abstract based on the knowledge profile <b>WK4</b> and <b>WK7</b>				
<b>SV13: Abstract</b>	<b>0.3</b>	<b>WP1:</b> Depth of knowledge <b>WK4:</b> Familiarity of Issues <b>WK7:</b> Comprehension	The abstract is very badly written	The abstract is badly written	The abstract is slightly flawed	The abstract is written well, and rather concise and comprehensive	The abstract is exceptionally well-written, concise and comprehensive

Performance Criteria	Weightage	Complex Problem (WP)	Description of Performance Criteria				
			Able to provide good introduction based on the knowledge profile <b>WK3, WK7 and WK8</b>				
		<b>Marks</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>SV14: Introduction</b>	<b>0.3</b>	<b>WP1:</b> Depth of knowledge <b>WP4:</b> Familiarity of Issues <b>WK3:</b> Engineering Fundamentals <b>WK7:</b> Comprehension <b>WK8:</b> Research literature	The research background, statement of problem, aims, objectives, scope and importance are unsuccessfully stated	The research background, statement of problem, aims, objectives, scope and importance are vaguely stated	The research background, statement of problem, aims, objectives, scope and importance are satisfactory	The research background, statement of problem, aims, objectives, scope and importance are clearly stated	The research background, statement of problem, aims, objectives, scope and importance are exceptionally well stated
			Able to provide good Materials and Methods based on the knowledge profile <b>WK4 &amp; WK5</b>				
		<b>Marks</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>SV15: Materials and Methods</b>	<b>0.4</b>	<b>WP2:</b> Range of conflicting requirements	The proposed methods are completely wrong and are described very badly	The proposed methods are mostly not acceptable and are described badly	The proposed methods are partly acceptable and are described in general terms	The proposed methods are appropriate and are described in detail	The proposed methods are very appropriate and are described in great detail
			Able to provide good Results and Discussion based on the knowledge profile <b>WK4</b>				
		<b>Marks</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>SV16: Result and Discussion</b>	<b>0.5</b>	<b>WP3:</b> Depth of analysis required <b>WK4:</b> Specialist knowledge	The results are reported and interpreted very ineffectively, and there are no discussions.	The results are reported and interpreted ineffectively, and there are insignificant or no discussions provided	The results are reported and interpreted rather ineffectively, and the discussions lack insightfulness	The results are reported and interpreted effectively, and the discussions are insightful	The results are reported and interpreted very effectively, and the discussions are very insightful



Performance Criteria	Weightage	Complex Problem (WP)	Description of Performance Criteria				
			Marks	1	2	3	4
<b>SV17: Conclusion</b>	<b>0.3</b>		The conclusions are weak and do not include significance and limitations of current work, and recommendations for future work	The conclusions do not identify the key findings and do not include the significance and limitations of current work, and recommendations for future work	The conclusions do not clearly identify the key findings and do not mention the significance and limitations of current work, or recommendations for future work	The conclusions clearly identify the key findings and include significance and limitations of current work, and recommendations for future work	The conclusions very clearly identify the key findings and include significance and limitations of current work, and recommendations for future work
<b>SV18: References</b>	<b>0.2</b>		The sources of reference are highly unreliable and citations are very inconsistent with the list of references	The sources of reference are not reliable and most citations are not consistent with the list of references	The sources of reference are questionable and some citations are not consistent with the list of references	The sources of reference are reliable and citations are consistent with the list of references	The sources of reference are very reliable and citations are very consistent with the list of references

<b>PART V: CERTIFICATION BY SUPERVISOR</b>	
<b>Comments (if any):</b>	
<b>Supervisor's Signature:</b>	<b>Date:</b>

Note: (1) This form must be completed and kept for documentation purposes.  
(2) The supervisor must submit these marks via FYP Online (<http://tcis.uthm.edu.my>)