

# FINAL YEAR PROJECT GUIDELINE

FACULTY OF EARTH SCIENCE EDITION 2016



### **FINAL YEAR PROJECT GUIDELINE**

**Faculty of Earth Science** 

Edition 2016 (Amendment 2024)

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## PREFACE

This document is prepared as a guideline for the writing of the Final Year Project Proposal and Project Report which will be conducted by the students in Semester 6 and Semester 7 for traditional programs and semester 7 and semester 8 for 3+1 programs. in fulfilment of the requirements for the Bachelor of Applied Science (Hons.). There are two types of final year project report writings to be covered in this guideline, namely project proposal and project report. Therefore, it is hoped that students and supervisors would give attention to and write according to this guideline. Please take note that the assessment of this course is not based merely upon the writing of the project paper. Other aspects relating to the student's commitment are also assessed by the supervisors.

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## CHAPTER 1

#### INTRODUCTION

#### 1.1 FINAL YEAR PROJECT GUIDELINE

The final year project (FYP) guideline is designed to guide the undergraduate student in conducting their final year research project before submitting to Faculty of Earth Science, Universiti Malaysia Kelantan (UMK). The FYP report is a partial requirement in awarding the Bachelor of Applied Science (Hons.). This guideline is intended to help student to produce a good research proposal and report writing within the standard and requirement which had been practiced by local universities.

The FYP is conducted in semester 6 (FYP I) and semester 7 (FYP II) for traditional programs and semester 7 (FYP I) and semester 8 (FYP II) for 3+1 programs. The students are expected to finish their research proposal and Chapter 1, 2 and 3 at the end of semester 6 for traditional programs and at the end of semester 7 for 3+1 programs. They must frequently meet their supervisors to discuss the research topics and clarify the problem statement, scope of research and past literature review.

In semester 7 for traditional programs and semester 8 for 3+1 programs, students will be focusing on experimental works, field works and data collection. Later, students should analyse the data obtained and prepare the final version of the project report. Finally, students need to present their findings to two examiners. This is to train the students in expounding statements of facts and defend such statement in front of audiences.

Towards the end of Final Year Project I, students should be able to:

- Apply the acquired knowledge and understanding for research purposes.
- Show a good effort and initiative in learning new knowledge.
- Identify the method used for research purposes and its preliminary results.
- Present theory, concept and research methodology in proposal presentation.

While for Final Year Project II, students should be able to:

- Carefully organize and conduct their research work based on research proposal that have been presented in the FYP I.
- Conduct research project with enthusiasm and full of determination.
- Explain the relevance of the data obtained in research with the theory and reference materials.
- Propose recommendations for any problem encountered in the research for future improvement.

The activities, duration, credit hours and mode of assessment in implementing FYP courses are as shown in Table 1.1.

Table 1.1 Activities of Final Year Project (FYP)

Activities	Duration	Credit Hours	Mode of Assessment	Evaluator		
	Final Year Project I (FYP I)					
Writing research proposal			Proposal and presentation	Two examiners		
Writing Chapter     1, 2 and 3	6 Months	3	Evaluation     of Chapter     1, 2 and 3	Two     examiners     and main     supervisor		
	Final Ye	ar Projec	t II (FYP II)			
Data analysis and result interpretation			Oral presentation	Two examiners		
Final Report     writing (complete     chapters)	6 Months	3	Final report	Two     examiners     and main     supervisor		

#### 1.2 OVERALL PERFORMANCE

The grading system for FYP is as shown in the Table 1.2.

Table 1.2 Grading system for FYP

Mark	Grade	Description
90 – 100	A+	
80 – 89	Α	
75 – 79	A-	
70 – 74	B+	
65 – 69	В	
60 – 64	B-	Pass
55 – 59	C+	
50 – 54	С	
45 – 49	C-	
40 – 44	D	
0 – 39	F	Fail

#### 1.2.1 Pass

- A report is passed if no substantive changes are required.
- A report is passed if it is acceptable in its present form or pending minor revisions.
- Changes in the form of corrections include:
  - a. Grammatical errors
  - b. Minor modifications to the thesis
  - c. Editorial revisions

#### 1.2.2 Fail

- A report is failed if it is unacceptable to the discipline even with substantive revisions.
- Fail to fulfil the supervisor-student meeting requirement.
- Fail to give own input for the project.
- Fail to perform all require presentations and report submissions (Table 1.1).

#### 1.3 PLAGIARISM

#### 1.3.1 Definition

The act of taking someone else's work or ideas and passing them off as one's own.

#### 1.3.2 Highlighted Issue

- Plagiarism is a serious academic offence and can result in penalties, including dismissal from the university.
- To avoid it, use quotations and paraphrases with proper referencing. When you are reading, keep careful notes of your sources, including all the bibliographic information that you need to write a full reference for the sources.

#### 1.3.3 Types of Plagiarism

- a. Word-by-word plagiarism copying exactly from someone else's text.
- b. Section-by-section plagiarism lifting phrases from someone else's text.
- c. Select-term plagiarism lifting a special term from a text not one's own.
- d. Paraphrasing using someone else's ideas as if they were one's own thoughts.
- e. Borrowing facts, statistics or illustrative material borrowing all listed information without acknowledging the author unless the information is common knowledge.

#### 1.3.4 Steps to Avoid Plagiarism

- a. Make notes while reading, keep careful notes of your sources, including all the bibliographic information that you need to write a full reference for the sources and include some terms that are used in the quoted source as they are technical terms.
- b. It is alright as long as you incorporated them within your own writing style.
- c. Acknowledge the author/reference gives credit to the original author whose idea, opinion or theory, any pieces of information that are not common knowledge (facts, statistics, graphs, drawings) you have used (it is known as documentation).

- d. Paraphrasing is an organized, systematic way of acknowledging sources of information, ideas, another person's actual spoken or written words and paraphrase of another person's spoken or written words within your own work.
- e. Paraphrasing means putting author's ideas or information into your own words. *Examples*:
  - Original: This has led to the conclusion that out of the US population at large, 90% watch television to excess (Wu, 1994).
  - <u>Paraphrased:</u> In contradiction to Suzuki's claim, Wu (1994) argues that 90% of Americans watch too much television.
  - (Avoid using Wu's exact words)
- f. Also with paraphrasing, it is easier to comment on the work you are referring to (eg. Here it is compared to Suzuki's).
- g. You should be careful to indicate which are your ideas and which are the author's by carefully use of references and by where and how you break sentences.

#### 1.3.5 Turnitin software

Turnitin is a coursework submission system, available that has main function of checking submitted work for plagiarism. The final similarity result should be below **20**%.

- a) Plagiarism Checking
- Turnitin compares submitted assignments to material held in the Turnitin database, allowing staff and students to check that their work is properly referenced. The software itself makes no decisions as to whether or not the work has been plagiarised, but highlights sections of text, and returns an overall percentage of material that has been found in other sources.
- Turnitin compares the assignment with current and archived web pages, a
  database of previously submitted student work, about 4000 electronic journal titles,
  and about 5000 copyright-free books.
- FYP supervisor can check that the matching work has been referenced fully and decide if work has been plagiarised. The option also exists to allow students to see their originality reports and to submit their work multiple times until the due date for the assignment, and if necessary take corrective action thus avoiding accidental plagiarism.
- Availability of electronic material on the internet has allowed uses of the material that couldn't have been envisaged when the majority of material was paper based.
- Allowing students to take an active part in discovering what academic honesty
  means will be more successful than a lone statement at the start of students'
  courses and modules that they must not use the materials of others and claim them
  to be their own.

#### 1.3.5.1 What Turnitin Can Do

- Quickly identify sources of plagiarised material.
- Encourage students to think about their referencing and citation skills.
- Help to prevent against accidental plagiarism (when used as part of the development of academic writing skills).
- Act as a deterrent against plagiarism.
- Work as a positive aid to marking by highlighting where students have referenced correctly and used the work of others well.

## CHAPTER 2

#### **ROLES, RESPONSIBILITIES AND TIMELINES**

#### 2.1 RESPONSIBILITIES OF STUDENT

Student responsibilities are as listed below:

- a. Decide a research topic, preferably based on area of student's interest. Student is encouraged to propose a research topic to potential supervisor.
- b. Plan the work properly and prepare work schedule for one year with the guidance of the supervisor.
- c. Follow strictly the timeline to ensure the project can be completed within provided time frame.
- d. Student will be given a Progress Report link to keep track of academic discussion progress with the supervisor. The Progress Report link will be used as a monitoring tool by the supervisor and coordinator. The Progress Report will be also used as a supportive document for show cause letters for instance of missing in-action students.
- e. Student need to fill out the Progress Report for every meeting or discussion. Ensure the supervisor approves the report link.
- f. Student is encouraged to conduct a weekly meeting with his/her supervisor so that the progress of their work can be monitored closely. Discussion can be through various communication channels.
- g. If necessary, student may apply for a supervisor change no later than week 4 of FYP 1 <u>UMK/FSB/FYP-F2 (EDITION 2017)</u> Appendix F). The application will be processed by the coordinator, and student will be informed of the outcome within 14 days from the date of application.
- h. Prepare and submit a research proposal, Chapters 1, 2 and 3 and Final Report according to the timeline. Students are also required to prepare proposal and final report presentations.
- i. Student is encouraged to complete their experimental and field work during the semester break to prevent any issues towards the end of the semester.
- j. For the laboratory utilisation:
  - Student must register for the use of laboratory equipment by completing Form UMK/A08/07/2023 and return the form prior to final report submission.
  - Student is mandatory to complete and pass the Good Laboratory Practice (GLP) test administered by the laboratory management.
  - Student is also responsible to check the availability of the required equipment, apparatus, and other materials to the laboratory management to ensure smooth laboratory operations.
  - Student is mandatory to comply with the laboratory procedures.

- k. For the fieldwork execution:
  - Student is required to comply with the Garis Panduan Kerja Lapangan Fakulti Sains Bumi.
- I. For data acquisition from external agencies:
  - Must be made with the faculty's permission and the process will be coordinated by the assigned coordinator and supervisor.
  - Student is not allowed to obtain data from other agencies in any way (email, call, message, face-to-face) either in hard copy or soft copy without the permission of the supervisor.
  - All applications for permits need to be discussed with the supervisor before the data collection is started.
  - Refer to Garis Panduan Kerja Lapangan Fakulti Sains Bumi.
- m. Ensure no grammatical errors and minimal plagiarism on the reports prior to submission to the coordinator. Please note that marks will be deducted for late submissions, with a penalty of one mark for each day of delay. Failure to submit within 7 days after the specified deadline will result in the reports being rejected, and the student will be barred from Proposal Defence and Viva.
- n. Following the presentation student is required to make the necessary corrections before submitting the hardbound copy to the faculty. As per current practice, submission involves both:
  - I. a softcopy to the faculty
  - II. a hardcopy to the supervisor
  - III. a hardcopy to the agency (if necessary)

Student must submit the hardbound copy to the coordinator, who will be responsible for distributing it to the respective supervisor. The submission must be completed on or before the designated deadline. Faculty have the right to reject late submission and not follow the hardbound format. The faculty reserves the right to impose appropriate penalties depending on the decision of the faculty's FYP Committee Meeting.

- o. Failure to adhere to the specified requirements may result in the imposition of penalties:
  - Fail to submit the Proposal Report (FYP1) or Final Report (FYP2) by the scheduled deadline will not be permitted to proceed with his/her proposal defence or viva voce presentation.
  - In a case of student that pass FYP1 but fail FYP2 has the option to either continue with the same FYP1 project under his/her current supervisor or select a new project under a different supervisor. If a student opts for a new project, his/her is required to present a new research proposal by the fourth week.
  - Any student found to have forged or falsified their supervisor's signature on submitted forms will have the forms declared invalid. If proven guilty, the student may face disciplinary actions, including the possibility of failing the course.
  - Student is considered fail if he/she fail to follow all the requirements of FYP.

#### 2.2 RESPONSIBILITIES OF SUPERVISOR

The faculty members who are going to supervise FYP students must at least graduate with Master Degree to qualify he/she to become a main supervisor. The role and responsibilities of supervisors are as listed below:

- a. Submit sufficient project topics and scope of research to FYP Coordinator according to the specified schedule set by faculty. The scope of research must comply with undergraduate level.
- b. Explain the objectives and scope of project to the students and set regular meeting with them.
- c. Remind students on the issues of plagiarism and its consequences. Originality of the work and report should be stressed out at the beginning of semester.
- d. Guide, supervise, encourage, and motivate the student from commencing until the end of FYP. Supervisors are encouraged to build a good relationship with their students without any prejudice.
- e. Monitor the student's progress using the Progress Report link provided by the coordinator. Should a student fail to respond or demonstrate progress by Week 7, promptly notify the coordinator to facilitate the issuance of a warning letter.
- f. Keep and endorse students' Progress Report link and ensure they follow the timeline closely.
- g. Guide students in preparing research proposal, chapter 1, 2, 3 and final report.
- h. Evaluate student's and submit the evaluation forms to FYP Coordinator according to the timeline:
  - Chapter 1, 2, 3 based on criteria listed in Rubrics Form <u>UMK/FSB/FYP-R-B1-CHAP1.2.3-SV (EDITION 2019)</u> (Appendix A)
  - Final report based on criteria listed in Rubrics Form <u>UMK/FSB/FYP-R-C1-SV</u> (EDITION 2019) (Appendix B, Appendix B2 (SEG))
- i. In the case of late report submissions (FYP II), the supervisor is responsible for imposing a penalty of one mark for each day the reports are submitted beyond the specified deadline. Reports submitted more than 7 days after the deadline will be rejected, and the student will be barred from Viva.
- j. Work closely with the laboratory staffs in purchasing the consumable items and using the lab's apparatus and equipment for field work.
- k. Consult FYP coordinator for any issues related to students under supervision.
- I. Write a letter of recommendation for student's application to extend the proposal or final report submission date (if applicable).
- m. For the fieldwork execution/ data acquisition from external agencies, supervisor is responsible to:
  - Obtain a formal letter from the Faculty to be sent to related agencies involved.
  - Apply for a permit from relevant agency pertaining to the proposed study.
  - Ensure compliance with the Non-Disclosure Agreement (NDA) (if necessary) executed by the authorised signatory.

#### 2.3 RESPONSIBILITIES OF EXAMINER

- a. Examiners are appointed by the FYP Coordinator according to their area of specialization.
- b. Their duties are:
  - Evaluate student's proposal report and presentation based on criteria listed in Rubrics Form <u>UMK/FSB/FYP-R-A-EX (EDITION 2018)</u> (Appendix C).
  - Evaluate student's final report based on criteria listed in Rubrics Form <u>UMK/FSB/FYP-R-C1-EX (EDITION 2019)</u> (Appendix D, Appendix D2 (SEG)).
  - Attend project presentation or find a representative if examiner is not available during the time of presentation.
  - Submit all students' presentation marks after presentation to FYP Coordinator and report marks according to timeline.

#### 2.4 RESPONSIBILITIES OF FYP COORDINATOR

FYP coordinator is appointed by the Dean with the following responsibilities:

- a. Acquire the student list according to the Bachelor of Applied Science program and distribute number of students to each supervisor.
- b. Collect research field and project titles from supervisors.
- c. Display the research field of potential supervisors for students to choose based on their area of interest.
- d. Collect list of students from their supervisors including title of research project.
- e. Vetting of FYP titles with head of program and supervisors using <u>UMK/FSB/FYP-F1</u> (<u>EDITION 2017</u>) (Appendix E).
- f. Release the final FYP titles to students.
- g. Organize a workshop in the beginning of FYP I to brief the final year students on the implementation of FYP. <u>UMK/FSB/FYP-R-B1-COOR (EDITION 2018)</u> (Appendix G)
- h. Appoint two examiners for each student. One of the examiners should be in the same area of specialization.
- i. Issue appointment letters for supervisors, co-supervisors and examiners.
- j. Distribute Progress Report link to supervisors to facilitate the monitoring of their respective students' progress.
- k. Manage warning letters to students using the Final Year Project Complaint form <a href="UMK/FSB/FYP-F5">UMK/FSB/FYP-F5</a> (EDITION 2024) (Appendix J)
- I. Prepare a schedule for proposal (FYP I) and final defend (FYP II) presentation.
- m. Collect and distribute the Proposal Report, Chapter 1, 2, 3 and Final Report to supervisors and examiners.
- n. In the case of a late report submission (FYP I), the coordinator is responsible for imposing a penalty of one mark for each day the report is submitted past the specified deadline. Reports submitted more than 7 days after the deadline will be rejected, and the student will be prohibited from participating in the Proposal Defence.

- o. Compile student evaluation forms from supervisors and examiners and fill in the marks in the system for grading purposes.
- p. Relay any information or news regarding FYP to supervisors, examiners, and students from time to time.
- q. Organize meetings with students, if needed, to clarify any problems during the duration of FYP.
- r. For any special cases that need further attention, coordinator needs to refer to the faculty's FYP Coordinator, Program Coordinator, Head of Department, Deputy Dean (Academic), and Dean before making any final decisions

#### 2.5 LABORATORY STAFF

Laboratory staffs are responsible to:

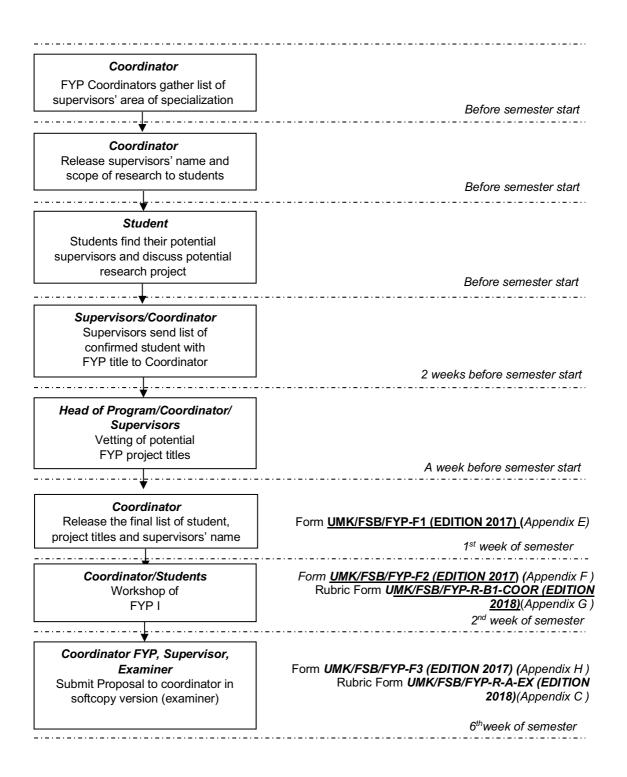
- a. Assist the students in conducting experimental work in the laboratory and field.
- b. Advice and assist the students in operating machines, testing equipments, calibrating instruments and related facilities.
- c. Guide student to handle consumble/usable materials.

#### 2.6 ADMINISTRATIVE STAFF

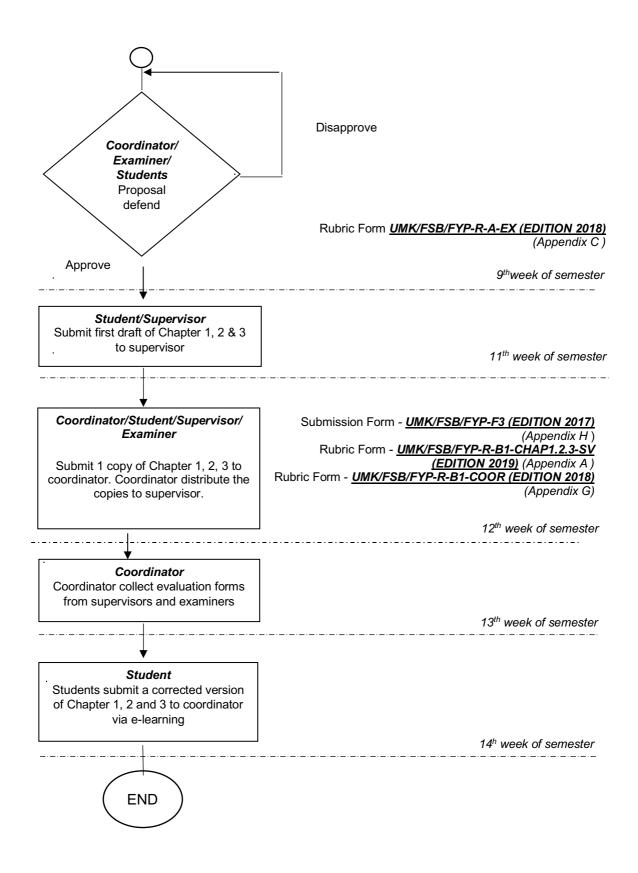
The administrative/ supporting staffs of the faculty are headed by an Assistant Registrar. Their duties are:

- a. Assist FYP Coordinator in maintaining FYP database.
- b. Perform some clerical works related to FYP.

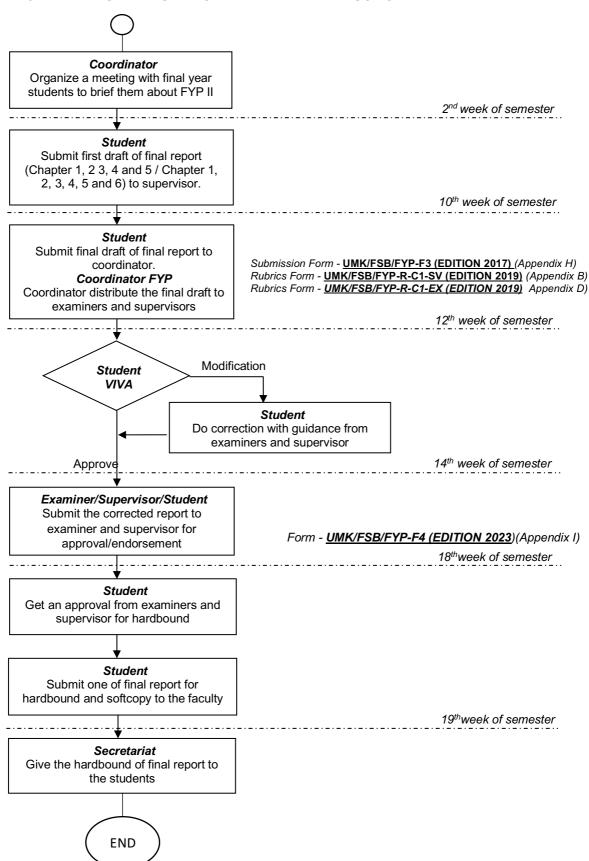
#### 2.7 WORKFLOW FOR FINAL YEAR PROJECT I



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#### 2.8 WORKFLOW FOR FINAL YEAR PROJECT II



#### 2.9 TIMELINE FOR FINAL YEAR PROJECT I

* Academic Week	Student	Supervisor	Examiner	FYP Coordinator
Before semester start	<ul> <li>Approach potential SV based on their expertise</li> <li>Discuss the potential FYP title.</li> </ul>	<ul> <li>Select student according to the allocated quota.</li> <li>Submit the FYP titles to the coordinator.</li> </ul>	-	<ul> <li>Set a quota of students for each SV.</li> <li>Receive a list of potential examiners for each project from supervisors.</li> <li>Set up vetting of potential FYP titles with Program Coordinator and Head of Department.</li> <li>Release the final titles &amp; student's name to the coordinator and all students UMK/FSB/FYP-F1 (EDITION 2017)</li> </ul>
Week 1	Discussion with SV.	Discussion with students.	-	Release the final project titles to students.
Week 2	<ul> <li>Attend the Final Year Project Workshop.</li> <li>Submit UMK/FSB/FYP- F2 (EDITION 2017) to Coordinator (if necessary).</li> <li>Produce a draft of the research proposal.</li> </ul>	-	-	<ul> <li>Organize Fin Year Project Workshop</li> <li>Receive UMK/FSB/FYP-F2 (EDITION 2017) from student.</li> <li>Evaluate participation &amp; commitment using UMK/FSB/FYP-R-B1-COOR (EDITION 2018).</li> </ul>

Week 6	Submit to Coordinator:  Research Proposal (softcopy)  UMK/FSB/ FYP-F3 (EDITION 2017) form signed by supervisor  *Marks will be deducted for late submission (1 day = 1 mark).  Failure to submit within 7 days after the due date will result in the Research Proposal being rejected, and student will be barred from Proposal Defence.	Receive 1 softcopy of the Research Proposal from the Coordinator	Receive from Coordinator:  1 softcopy of the Research Proposal  UMK/FSB/ FYP-F3 (EDITION 2017) form  UMK/FSB/FYP-R A EX (EDITION 2018) rubric form	Receive from students:  1 softcopy of the Research Proposal & distribute the proposal to supervisors & examiners  1 softcopy of the UMK/FSB/FYP-F3 (EDITION 2017) form & distribute the forms to examiners  Distribute UMK/FSB/FYP-R-A-EX (EDITION 2018) rubric form to examiners  Set the date, time & place for the Research Proposal Defence.
Week 7	-	-	Evaluate the Research Proposal (softcopy)	<ul> <li>Distribute the timetable to the examiners and students.</li> <li>Arrangement for the Research Proposal presentation (venue and technical).</li> </ul>

Week 9	Students present & defend their Research Proposal. Receive their Research Proposal comments from examiners after presentation.  *Students who do not submit a research proposal, are prohibited from attending the presentation session	Attend student's proposal presentation (if available).	<ul> <li>Give the Research Proposal to the students after the presentation.</li> <li>Submit UMK/FSB/FYP-R-A-EX (EDITION 2018) rubric form to Coordinator.</li> </ul>	<ul> <li>Collect two UMK/FSB/FYP-R-A- EX (EDITION 2018) rubric forms from examiners.</li> <li>Organize the proposal defence and ensure everything runs as scheduled.</li> </ul>
Week 10	Submit the research ethics form	Review the research ethics form before submitting it to the coordinator	-	Receive research ethics form
Week 11	Submit one copy of draft Chapter 1,2,3 to the supervisor.	Receive one copy of draft Chapter 1,2,3 from the student	-	-
Week 12	<ul> <li>Submit to Coordinator:</li> <li>1 softcopy of Chapter 1,2,3.</li> <li>1 softcopy of UMK/FSB/FYP-F3 (EDITION 2017) form signed by</li> </ul>	Receive from Coordinator:  • 1 softcopy of Chapter 1,2,3 UMK/FSB/FYP-R- B1-SV (EDITION	-	<ul> <li>1 softcopy of Chapter 1,2,3 &amp; distribute the report to supervisor</li> <li>1 softcopy of UMK/FSB/FYP-F3 (EDITION 2017)</li> </ul>

	supervisor.  *Marks will be deducted for late submission (1 day = 1 mark)	<ul> <li>2018) rubric form.</li> <li>Evaluate Chapter 1,2,3.</li> <li>Submit UMK/FSB/FYP-R-B1-SV (EDITION 2018) rubric form to the coordinator when done evaluating the report.</li> </ul>	Collect UMK/FSB/FYP-R-B1-SV (EDITION 2018)     rubric from the supervisor     Evaluate participation & commitment using     UMK/FSB/FYP-R-B1-COOR (EDITION 2018)	
Week 14	<ul> <li>Do correction &amp; submit the corrected version to supervisor for correction approval (UMK/FSB/FYP- F3 (EDITION 2017) form.</li> <li>Submit corrected version of Chapter 1,2,3 to coordinator via e-learning.</li> </ul>	Receive UMK/FSB/FYP-F3 (EDITION 2018) form.	<ul> <li>Collect <i>UMK/FSB/FYP-F3</i> (<i>EDITION 2018</i>) form.</li> <li>Receive corrected version of Chapter 1,2,3 from students via e-learning.</li> <li>Evaluate participation &amp; commitment using <i>UMK/FSB/FYP-R-B1-COOR (EDITION 2018)</i>.</li> </ul>	
		Study Week		
	Examination Week			
	Semester Break			

<sup>\*</sup>Subject to changes according to the academic calendar

#### 2.10 TIMELINE FOR FINAL YEAR PROJECT II

* Academic Week	Student	Supervisor	Examiner	FYP Coordinator
Week 2	-	-	-	Organize a meeting/workshop with final year students to brief them about FYP II
Week 10	Submit the first draft to the supervisor.	Evaluate the first draft and the correction version of the FYP Report.	-	-
Week 12	Submit to the coordinator:  Softcopy of Final report  UMK/FSB/FYP-F3 (EDITION 2017) form (signed by supervisor)  *Marks will be deducted for late submission (1 day = 1 mark).  Failure to submit within 7 days after the	<ul> <li>Sign the UMK/FSB/FYP-F3 (EDITION 2017) form</li> <li>Receive: - FYP final report UMK/FSB/FYP-R-C1-SV (EDITION 2019)</li> </ul>	Receive:  • FYP final report  • UMK/FSB/FYP-F3 (EDITION 2017)  • UMK/FSB/FYP-R- C1-EX (EDITION 2019)	<ul> <li>Make sure all examiners receive their FYP final report.</li> <li>Set the date, time &amp; place for Viva.</li> </ul>

	due date will result in the Final Report being rejected, and student will be barred from Viva.				
Week 13	-	Evaluate the FYP Final report.	Evaluate the FYP Final report.	<ul> <li>Distribute timetable to the examiners and students.</li> <li>Arrangement for the Viva (venue and technical).</li> </ul>	
Week 14	Attend Presentation Viva     Receive their final report from examiners after presentation      *Students who do not submit a final report, are prohibited from attending the presentation session	Submit     UMK/FSB/FYP-R-     C1-SV (EDITION     2019) to FYP     coordinator	Submit to FYP Coordinator:  FYP Final report (on the day of presentation)  UMK/FSB/FYP-R- C1-EX (EDITION 2019)  UMK/FSB/FYP-F3 (EDITION 2017) form	Collect:  • FYP final report (on the day of presentation)  • UMK/FSB/FYP-R-C1-SV (EDITION 2019)  • UMK/FSB/FYP-R-C1-EX (EDITION 2019)  • UMK/FSB/FYP-F3 (EDITION 2017) form	
		Study Week			
	Examination Week				
Week 18	Submit corrected version to supervisor for correction approval (UMK/FSB/FYP-F4)	Receive  UMK/FSB/FYP-F4  (EDITION 2023) form	-	Compile all the marks from supervisor and examiner	

	form Proceed with hardbound		
Week 19	<ul> <li>Submit 1 hardbound copy and 1 softcopy (provided platform)</li> <li>Submit UMK/FSB/FYP-F4 (EDITION 2023) form.</li> <li>Upload postage proof and tracking number.</li> </ul>	_	Receive and distribute hardbound, <i>UMK/FSB/FYP-F4 (EDITION 2023)</i> form and postage proof and tracking numbers from students.

<sup>\*</sup>Subject to changes according to the academic calendar

## CHAPTER 3

#### **FORMAT**

#### 3.1 REPORT FORMAT

#### 3.1.1 Language and Report Length

The final year report should be in ENGLISH. Maximum pages are as followed:

Research Proposal	2000 – 4000 words (excluding the references and appendices)
	(10 - 15 pages)
Chapter 1,2 & 3	6000 – 10000 words (excluding the references and appendices) (40 - 50 pages)
Final Year Report	Not more than 18000 words (excluding the references and appendices) (70 - 90 pages)

#### 3.1.2 Printing

• Microsoft Word format should be used. All final copies of the report should be printed using laser printer to ensure good quality of the printing. White A4 paper (210 mm x 297 mm) of 80 grams weight should be used. If paper of larger size is used (e.g. schematics, drawings, etc.), they must be folded into A4 size. Printing is on one side of the paper only. When binding, these printed pages must be in the right hand side. The use of colour in the report is advisable.

#### 3.1.3 Font Size

- The body text size is 12 point for "Times New Roman" (TNR). Text should not be scripted or italicized except for:
  - a. scientific names
  - b. terms in a different language
  - c. quotations
- Footnotes, caption and content of tables and figures should be 10 point TNR font size.

#### 3.1.4 Headings and Subheadings

- These should be in **bold** print in 12 point TNR font size. Chapters must be numbered without any decimals.
- Headings within chapters must be numbered according to the format Chapter i.e.
   CHAPTER 1, CHAPTER 2, CHAPTER 3.
- The title of a chapter should be typed using CAPITAL LETTERS and centred. A new chapter must start on a new page. Chapters and their sub-headings must be given titles. The title of sub-heading should be Capitalized Each Word. The titles should be typed using **bold** letters and should not be underlined.

- 4 line spacing should be used between Chapter and Title of the Chapter; last paragraph of Sub-heading and Sub-sub-heading; last paragraph of sub-sub-heading and a new sub-sub-heading. However, 6 line spacing should be used between Title of the Chapter and Sub-heading.
- Sub-headings with a decimal indicating the depth level. A depth level of not more than three (3) is recommended (2 decimals) levels as follows:
  - **1.1 Second level** (Title of the sub-heading)
  - **1.1.1 Third level** (Title of the sub-sub-heading)
- If the length of a title of a chapter or any level is more than one line, same line spacing as in the text should be used. Examples are shown in Appendices K.

#### 3.1.5 Margins

• Margin specifications are meant to facilitate binding and trimming. The stipulated margins for the general text (body of report) are as follows:

Top edge : 2.5 cm Right side : 2.5 cm Left side : 4.0 cm Bottom edge : 2.5 cm

• All information including text headings, footnotes and illustrations should be within these margins.

#### 3.1.6 Paragraphs

- A new paragraph at bottom of a page must have at least two full lines of text. Otherwise, it should begin in the next page.
- Paragraphs must be indented with not more than one (1) tab-key spacing.
- Double line spacing is required between paragraphs and captions; between paragraphs and floats.
- Double line spacing in between lines.
- Single line spacing should only be used for Abstract and References.
- Paragraphs must be left-aligned and justified.
- The following spacing should be followed for the report document:

SPACING	PART
	Title page
1.0 spacing	Abstract/ Abstrak
	References
	Declaration
	Acknowledgement
1.5 spacing	Table of contents
	List of tables
	List of figures

	List of abbreviations
	List of symbols
	Appendices
2.0 spacing	Chapter 1 - 6

#### 3.1.7 Pagination

- Every sheet of paper in the manuscript except the title page and student declaration must be numbered. Begin numbering with acknowledgments, table of contents, list of tables, list of figures, list of abbreviations and list of symbols (optional) and abstract using lower case Roman numeral (ii,iii, iv...).
- The main text pages are to be numbered in Arabic numerals (1, 2, 3 ...).
- The page number must be centred from the bottom of the page. Page numbers must be in TNR 12 point font size. They should NOT be in italic or bold font.
- They must also appear by themselves and are not to be enclosed in parentheses, hyphens or any other decorative fonts. Special characters should not be included with the page number.
- Page number must be printed 1.25 cm from the bottom of the page (in the footer section).
- The following pagination should be followed for the report document:

PAGINATION	PART
None	Title page
	Declaration
	Acknowledgement
	Abstract
Starting with 'i' at the	Abstrak
bottom centre	Table of contents
	List of tables
	List of figures
	List of abbreviations
	List of symbols
	Chapter 1 - 6
Starting with '1' at	References
the bottom centre	Appendices

#### 3.1.8 Equations

Equation can be inserted in Microsoft Word using Equation tool. The equation must be numbered in Arabic numerals (TNR 12 point) enclosed in parentheses on the right hand margin. The setting should be Chapter followed by number (Chapter, number). They should be cited in the text, for example, Eq. (3.1) - (3.2). Equations start from the left.

Double spacing is used between equation and paragraphs. Punctuate equations with commas or periods when they are part of the sentence. For example,

$$A = \pi r^2 \tag{3.1}$$

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \tag{3.2}$$

#### **3.1.9** Tables

- Tables must be centred and top of the page within the prescribed margins. Each table must have a reference number (in Arabic numeral) and a caption. The captions should be in sentence case (for e.g., Proximate analysis for bottom portion). It may be useful to group tables in each chapter together and to number them in sequence. For example, tables found in Chapter 1 should be numbered Table 1.1, Table 1.2, Table 1.3, and so on. Refer to Appendix L.
- Bold the word Table and its number. The caption (TNR 10 point) must appear above
  the table. If any table continues to the following or subsequent pages, the top line of
  the page reads. For example: **Table 1.1** (Continued). The caption is not repeated. If a
  table is taken from another source, the reference must be cited at the bottom of the
  table (TNR 10 point). Double spacing is used between table titles and paragraphs.

#### **3.1.10** Figures

Figures may be illustrations, graphs, maps, charts, and diagrams and anything that is neither script nor table. Bold the word Figure and its number (in Arabic numeral). The caption (TNR 10 point) should be placed below the figure. The figure label should not extend beyond one page. However, if it does, the same guidelines for tables should be followed. Figures should be grouped and numbered in sequence. For example, Figure 3.1 should be located in Chapter 3. If a figure is taken from another source, the reference must be cited at the bottom of the figure (TNR 10 point). Refer to Appendix M.

#### **3.1.11** Binding

The first submission of the final year project report manuscript for evaluation and examination purposes should be in comb binding. The final submission of the FYP report must be in hardbound. Information printed on the cover and the spine must be with gold-colored .The colour of the cover should follow the official faculty colour. The material for the cover is the Buckram.

#### 3.2 ARRANGEMENT AND CONTENTS

#### 3.2.1 Research Proposal

The contents should be arranged in the following order:

#### a. TITLE

#### b. INTRODUCTION

- i. Background of Study
- ii. Problem Statement
- iii. Objectives
- iv. Expected Outcomes
- v. Scope of Study
- vi. Significance of Study
- vii. Study Area (if applicable)

#### c. LITERATURE REVIEW

#### d. MATERIALS AND METHODS

- i. Study area
- ii. Data collection
- iii. Data analysis

#### e. RESEARCH FLOW CHART

#### f. GANTT CHART & MILESTONES

- i. Gantt Chart
- ii. Milestones

#### g. REFERENCES

Content Details for research proposal are as follows:

#### a. Title

- Report title should be short and precise.
- The length of the title that is allowed is within 10 20 words.
- Species names should be written according to the international code of nomenclature (ICZN, ICBN).

#### b. Introduction

The main intention here is to get the readers' interest. The introduction often contains general statements about the need for the research study. It sets the stage to proceed and elaborate on the subject.

#### i. Background of Study

Background of the study is the part of any research where the particular topic is placed. This may contain the general description, and may include the broader description of the topic. Other includes a brief preview of the topic to discuss.

#### ii. Problem Statement

- A problem statement is a clear description of the issue(s), it includes a vision, issue statement, and method used to solve the problem.
- The 5 'W's can be used to spark the discussion about the problem.
- A problem statement expresses the words that will be used to keep the effort focused and it should represent a solvable problem.

#### iii. Objectives

- The objective of the study is what researchers intend to accomplish in their study. Researchers need to tell the audience their goal to achieve in solving the problem.
- Research objectives should be expressed in measurable words and reflect expected results
- Research objectives should be started with high impact, result oriented verbs.
- Example: To investigate, To recognize, To ascertain, To develop, To determine

#### iv. Expected outcome

This section should give a good indication of what you expect to get out of the research. It should join the possible outcomes to the theory and questions that you have raised. It will be a good place to summarize the significance of the work.

#### v. Scope of Study

- Scope of study is a statement that describes the specific area of study, method or tools to be used in the research.
- Scope of study is actually limiting the amount of work that you intend to do to achieve your work.
- Clearly state parameters will help the reader/examiner not to be left in any doubts as to what you are covering in terms of the scale of research.
- It sets the limits to the areas of interest, time and materials involved.

#### vi. Significance of Study

- Significance of study discusses the methodological, substantive, and/or theoretical contribution.
- The practical and/or theoretical importance of the problem and/or objectives of your study should be stated here.
- Significance of study explains the usefulness or benefits of the study to both the outside world and the research community.

#### vii. Study Area (if applicable)

- A study area is geography for which data is analyzed in a report and/or map. There are two ways to define study areas; site based study area and geographical unit based study area
- Study area should clearly describe the geographic location(s), cultural resources, site numbers, etc. Maps and/or geographic

\*Note: Number of objectives require for: B. Sc: 2 – 3

#### c. Literature Review

Research background should comprise a literature review which can show clearly the following information:

- i. The history of the subject and its latest development.
- ii. The rationales of conducting the research.
- iii. The uniqueness of the research as compared to previous studies on almost similar titles or field of study
- iv. Main and prominent publications on the subject, which cannot be neglected or omitted, for whatever reasons.
- v. A list of references quoted.

#### d. Materials and Methods

This section should make clear to the reader the way that you intend to approach the research question, techniques and logic that you will use to address it.

#### i. Study Area (if any)

- A brief explanation of study area;
- The location of your study area
- A complete base map (containing longitude, latitude, road, drainage, contour, village, etc.)
- A general account about topography and geomorphology

#### ii. Data Collection

- This might include the field site description, a description of the instruments used, and the data collected. You may need to comment on site and resource accessibility, time frame and budget availability.
- You should emphasise in this section specifically what data you will be using in your study. It is to detect flaws in the plan before they become problems in the research.

#### iii. Data Analysis

- This should explain in some detail how you will manipulate the data that you assembled to get at the information that you will use to answer your question.
- It will include the statistical or other techniques and tools that you will
  use in processing data. It probably should also include an indication of
  the range of outcomes that you could reasonably expect from your
  observations.

#### e. Research Flow Chart

- It can be constructed at many levels and for a variety of reasons. At the simplest level, it is about retrieving already existing knowledge and at a more complex level, it is about discovering new knowledge which can move away from a simple 'common sense' of understanding or uninformed expression of opinion.
- Your proposal needs to show detailed planning of the process you intend to follow to complete your project.
- Please refer to Appendix N as an example.

#### f. Gantt Chart & Milestones

#### i. Gantt Chart

- A Gantt chart is one of the most popular and useful ways of showing activities (tasks or events) displayed against time. On the left of the chart is a list of the activities and along the top is a suitable time scale.
- Each activity is represented by a bar/arrow; the position and length of the bar reflects the start date, duration and end date of the activity.
- This allows you to see at a glance:
  - O What are the various activities?
  - o When does each activity begin and ends?
  - O How long is each activity scheduled to last?
  - Where activities overlap with other activities, and by how much?
  - o The start and end date of the whole project?
- Please refer to Appendix O as an example.

#### ii. Milestones

- A research milestone is the measure that tells you, as a researcher, that your work is progressing.
- Each milestone should be constructed to include the goals and timeline for completion (usually at the end of each semester).
- Note that not all of your activities generate milestones.
- Milestones are NOT a list of tasks to be completed; they are goals to be achieved.

Please refer to Appendix P as an example.

#### g. References

All used references should be cited and all cited references should be listed in the references list. Please refer to Chapter 4 of this book for detailed reference format.

#### 3.2.2 Chapter 1, 2 & 3 / Chapter 1, 2, 3 & 4

- The contents should be arranged in the following order:
  - i. TITLE PAGE
  - ii. TABLE OF CONTENTS
  - iii. LIST OF TABLES
  - iv. LIST OF FIGURES
  - v. LIST OF ABBREVIATIONS (optional)
  - vi. LIST OF SYMBOLS (optional)
  - vii. MAIN TEXT (CHAPTER 1 3/4)
  - viii. REFERENCES
  - ix. APPENDICES (optional)

#### 3.2.3 Final Year Report

- The contents should be arranged in the following order:
  - i. TITLE PAGE
  - ii. DECLARATION
  - iii. ACKNOWLEDGEMENT
  - iv. ABSTRACT
  - v. ABSTRAK
  - vi. TABLE OF CONTENTS
  - vii. LIST OF TABLES
  - viii. LIST OF FIGURES
  - ix. LIST OF ABBREVIATIONS (optional)
  - x. LIST OF SYMBOLS (optional)
  - xi. MAIN TEXT (CHAPTER 1 5 or 6)
  - xii. REFERENCES
  - xiii. APPENDICES (optional)

#### 3.2.4 Cover and Spine (hardbound)

- a) Cover
- The information printed on the cover page should include in the given order (refer to Appendix Q)
  - i. FULL TITLE
  - ii. FULL NAME (as in identity card or passport for international student)

- iii. FACULTY OF EARTH SCIENCE and UNIVERSITI MALAYSIA KELANTAN
- iv. Year (Publication year)

#### b) Spine

- Information printed on the spine must be gold-coloured letters, TNR, and must be in the following order (refer to Appendix R):
  - i. NAME
  - ii. FULL NAME OF THE BACHELOR DEGREE PROGRAM
  - iii. Year (publication year)

#### 3.2.5 Title Page

- The information printed on the title page should include the following information exactly in the given order (refer to Appendix S):
  - i. UMK logo
  - ii. FULL TITLE
  - iii. FULL NAME (as in identity card or passport for international student)
  - iv. Statement of award for the thesis
  - v. FACULTY OF EARTH SCIENCE and UNIVERSITI MALAYSIA KELANTAN
  - vi. Year (publication year)

#### 3.2.6 Student Declaration

- Declaration should be placed after the first page of the title page of the report.
- The word DECLARATION is stated in the centre at the top of body text.
- 6 line spacing should be used between the word DECLARATION and text (Appendix T).

#### 3.2.7 Acknowledgement

- Acknowledgement should include a brief statement of thanks in recognition of special assistance and guidance given by individuals, institutions or government bodies.
- It should only be one page length.
- The word ACKNOWLEDGEMENT is stated in the centre at the top of body text.
- 4.5 line spacing should be used between the word DECLARATION and text (Appendix U).

#### 3.2.8 Abstract/ Abstrak

- a) Abstract
- An abstract in English version.
- The abstract is a summary of the entire report. It should briefly cover introduction, problems statement (justification) or significance of the study, objectives, materials and methods and the findings in the context of the field of study.
- The word ABSTRACT is stated in the centre at top of the body text.
- Body text is in one paragraph only (not more than 300 words).

• 2 line spacing should be used between the title and the word ABSTRACT and 1 line spacing between the word ABSTRACT and the text (Appendix V).

#### b) Abstrak

- Abstrak is an abstract in Bahasa Melayu version translated from English version.
- The word ABSTRAK is stated in the centre at top of the body text (Appendix W).

#### 3.2.9 Table of Contents

- The title of chapters, headings and subheadings along with the page numbers on which they appear must be listed in the table of contents.
- The word TABLE OF CONTENTS should be written centred at the top of the page.
- The title of chapters, headings and subheadings should be exactly the same as in the body text.
- Report with many subheadings must use a hierarchical numbering system for headings and sub-headings (Appendix X).

#### 3.2.10 List of Tables

- This list of tables contains all the titles of the tables in the report, along with the page numbers on which it appears.
- All tables must be numbered consecutively throughout the text according to the chapters.
- The word LIST OF TABLES is stated in the centre at the top of body text.
- Tables appearing on the list should be precise and concise (Appendix Y).

#### 3.2.11 List of Figures

- The list of figures includes all the title of charts, graphs, illustrations, diagrams, maps, pictures, photographs and other similar non-text items in the report.
- The word LIST OF FIGURES is stated in the centre at the top of body text.
- Figures must include numbering and the pages on which they appear.
- Figures should be numbered consecutively throughout the text according to the chapters.
- Figures appearing on the list should be precise and concise (Appendix Z).

#### 3.2.12 List of Abbreviations

- This page defines all abbreviations used in the report.
- This list is optional depending on the subject of the report.
- Actual word represented by the abbreviation should be accurate.
- The word LIST OF ABBREVIATIONS is stated in the centre at the top of body text (Appendix AA).

#### 3.2.13 List of Symbols

This page defines all symbols used in the report.

- This list is optional depending on the subject of the report.
- All scientific symbols must be presented with units that follow the standard SI system.
- The word LIST OF SYMBOLS is stated in the centre at the top of body text (Appendix AB).

#### 3.2.14 Main Text (Final year report)

- The main body of the report is usually arranged into consecutively numbered chapters
  or sections. The internal organization of the report is the responsibility of the
  candidates in consultation with their supervisor(s). The organization will partly depend
  on the field of study, but the responsibility is on the candidate to provide a systematic
  and well-organized report.
- A report will often include the following chapters:
  - a. Chapter 1 : Introduction
     This chapter shall highlight the background of the study, problem statement, justification, objectives, scope of study and significance of the study.
  - b. Chapter 2 : Literature Review
    Reviews from the previous study literature related to the research are discussed and gaps identified as the basis of the research.
  - c. Chapter 3 : Materials and Methods All relevant experimental, descriptive, theoretical and analytical techniques used in the research should be outlined, such that another researcher could repeat the study. Reference of methods to other research should be made where appropriate.
  - d. Chapter 4 : Results and Discussions /General Geology (if related)

divided into two (2) separated chapters

- Results and Discussions
   This chapter includes the analysis and presentation of data. The results should be interpreted and summarized. If necessary this chapter can be
- General Geology (if related)
   \*\*Refer to supporting materials
- e. Chapter 5 : Conclusion and Recommendations/Specification (if related)

  Conclusion and Recommendations

Provides the context in which to interpret the results of the study, stressing the significance, implications and limitations of the findings. This chapter should relate to the initially set out objectives spelled out at the beginning of the report *Specification (if related)* 

This chapter includes the analysis and presentation of data of your main specification (e.g. slope stability analysis, facies analysis, geoheritage, etc.). The results should be interpreted and summarized.

f. Chapter 6 : Conclusion and Recommendations (if related)

#### 3.2.15 References

 References are detailed description of items from which information were obtained in preparing the thesis. All references must be listed at the end of the text. They should be arranged using one of the methods discussed in Chapter 4 of this book.

#### 3.2.16 Appendices

- This section is optional and will depend on the individual report content. It contains supplementary illustrative material, original data and quotations, too long for inclusion and not immediately essential to the understanding of the subject.
- Appendices allow author to include all the materials or illustrations without influence the reader concentration. These include tables, charts and etc.
- Appendices are identified separately using capital letters (A, B, C, etc.) and written as, for example APPENDIX A.
  - All pages in the appendices including those with diagrams, tables, images, etc. must have a page number. The pagination of the page must be continuing after references.
  - Attention should be paid on the issues as a write-up does not necessary to have appendix. If applicable, research data, tables, sample of questionnaire, maps, photos and others material which are too lengthy to be included in the main text, can be attached as APPENDIX. Supplementary materials can also be included in this section.

## CHAPTER 4

#### REFERENCE

#### 4.1 INTRODUCTION

A list of references should be provided when the thesis contains information from other sources, either in direct quotation or by reference. All references that appear in the text of the thesis must be listed on the **REFERENCES** page in alphabetically order, and any item appearing on the **REFERENCES** list should be cited in the thesis. The details of the references cited in the text and on the **REFERENCES** page should be presented according to the American Psychological Association's (APA) Referencing and Citing Manual standard.

#### 4.2 LIST OF REFERENCES

All references cited should be listed in the **REFERENCES** at the end of the last chapter. List the references alphabetically. If more than one published materials by the same author are cited, these materials should be listed chronologically as stated in section 4.3.3 (c).

#### 4.2.1 Title

The title **REFERENCES** should be located at the top centre of pages and its using capital letters.

#### 4.2.2 Font

The references must be written in **12 pt Times New Roman** font. Candidates should take note that **APA style** requires certain fields within a reference to be *italic*.

#### 4.2.3 APA (American Psychology Association) Reference Format

Bibliography using APA style should include this following information:

- a. Authors or writers full name and a full stop (.)
- b. Year published in bracket and a full stop (.)
- c. Article; title of article and end with a full stop (.) There is no need for quotation sign "or "".
- d. Book or periodical publication; the title is in italic and ends with a full stop (.)
- e. Number of edition/printing and a full stop (.)
- f. Name of translator, if the material is translated, and a full stop (.)
- g. Place of Publication and a full stop (.)
- h. Publisher name and a full stop (.)

#### 4.2.4 List of references style

- a. Entries must be in alphabetical order (A Z). The first line of a reference should be flushed with the left margin.
- b. Each additional line must be indented once (usually accomplished by using the TAB key).
- c. Only one space after any form of punctuation is required.
- d. Each reference and the space between references shall be single spaced (1.0 spacing).

#### 4.3 WRITING STYLE FOR AUTHORS' NAMES IN THE TEXTS

#### 4.3.1 Text: Author / Authors and Year

APA utilizes a system of brief referencing in the text of a paper, whether one is paraphrasing or providing a direct quotation from another author's work. Citations in the text usually consist of the name of the author(s) and the year of publication.

#### 4.3.2 Quotation with Parenthetical Citation

a. Single Author: Bracket the name of the author / authors, put comma (,) and the year of publication.

Example (single author):

(Name of the Author, Year)

Example: (Ballantyne, 1986)

Most documented landslides in Scotland belong to one of four categories: non rock slope failures, rotational rock slope failures, shallow debris flows and debris slides developed in superficial deposits (Ballantyne, 1986).

b. Two Authors: Name both authors in the signal phrase or in the parentheses each time you cite the work. Use the word "and" between the authors' names within the text and use "%" in the parentheses.

Example (two authors):

(Name of the First Author & Name of the Second Author, Year)

Example: (Cruden & Varnes, 1996).

Debris slides have typical length-to-width ratios of between 5:1 and 10:1 or more (Cruden & Varnes, 1996).

According to Cruden and Varnes (1996), debris slides have typical length-to-width ratios of between 5:1 and 10:1 or more.

c. Three to Five Authors: For the first citation in the text, state the entire author's name and use either word "and" in the text or symbol "&" in the parentheses before the name of last author.

Example (five authors):

(First Author, Second Author, Third Author, Fourth Author, & Fifth Author, Year)

Example: (Muhammad Iqbal Ahmad, Zainal, Mazlan, Mustafa Al Bakri, & Salim, 2013)

For the subsequent citations in the text, state the first author's name followed by et al.

(Name of the First Author et al., Year)

Example: (Muhammad Iqbal Ahmad et al., 2013)

d. Six or more Authors: Use the first author's name followed by et al. in the signal phrase or in parentheses.

Example (more than 6 authors):

(Name of the First Author et al., Year)

Example: (Merckx et al., 2015)

#### 4.3.3 Citing in the text

The references cited in the text should be indicated using the name of the author and the date of publication. Examples are as follow:

a. If the name of an author is written as part of a sentence, the year published should be written in parentheses.

Example: "Works by Yao (1993) have shown that in order to maintain the behavioural link between the off springs and their parents, the use of cross over operator should be avoided."

b. If the name of an author is not written as part of a sentence, both the name and year published should be written in parentheses.

Example: "ANN offers useful properties and capabilities such as non-linearity, input and output mapping, adaptability and fault tolerance among others (Haykin, 1999)."

c. If more than one reference materials by the same author in a same year are cited, use small letter alphabets (a, b, c, and so on) to distinguish them.

Example: "Some of the basic principles widely used by many researchers are Lagrange-Euler (LE) equations (Uicker, 1965; Bejczy and Paul, 1981), Newton-Euler (NE) equations (Luhet al., 1980a) and d'Alembert (GD) equations (Lee et al., 1983)."

"Luh et al. (1980b) presented an example of an acceleration control of robot arm/manipulator."

d. Cross referencing in not allowed in a thesis. Only primary sources should be used.

## 4.4 WRITING STYLE FOR AUTHORS' NAMES IN THE LIST OF REFERENCES

Frequently, different types of publication materials are cited in a thesis. The style of writing details on cited publication in the list of **REFERENCES** should be as stated in section 4.4.1 to 4.4.4.

Generally authors' names are listed using surname followed by their initials. The followings are examples of writing format according to the name of the author:

a. Western Name – write the family name first and followed by other name.

Example:

Name : Barack Obama Is written as : Obama, B.

b. Malay Name – follow the author name

Example:

Name : Wani Sofia Udin Is written as : Wani Sofia Udin

c. Sabahan or Sarawakian Name – follow the author name

Example 1:

Name : Elvaene James Is written as : Elvaene James

Example 2:

Name : Eli Anak James

Is written as : Eli James

d. Arab Name – either use his family name (Example 1) or use the author name if his family name is not available (Example 2).

Example 1:

Name : Syed Muhammad Hamzah Al-Ibn Is written as : Al-Ibn, Muhammad Hamzah, Syed

Example 2:

Name : Malik Ibn Anas Is written as : Malik Ibn Anas

e. Chinese Name – Author name is the family name. The family name or surname is placed first.

Example:

Full Name : Lim Juk Eng Is written as : Lim, J. E.

f. Indian Name - use the author's name (Example 1 and Example 2) or reverse the order if there is abbreviation in the name (Example 3).

Example 1:

Name : Rajeevan a/l Balakumar Is written as : Rajeevan Balakumar

Example 2:

Name : Nivaarani Arumugam

Is written as : Nivaarani, A.

Example 3:

Name : B. Rathinee Is written as : Rathinee, B.

g. Punjabi Name – use the author name

Example:

Name : Viki Singh Is written as : Viki Singh

#### 4.4.1 Articles in Periodicals

#### a. Basic Form

APA style dictates that authors are named with last name followed by initials; publication year goes between parentheses, followed by a period. The title of the article is in sentence-case, meaning only the first word and proper nouns in the title are capitalized. The periodical title is run in title case, and is followed by the volume number which, with the title, is also italicized.

Author, A. A., Author, B. B., & Author, C. C. (Year). *Title of the article. Title of Periodical*, volume number (issue number), pages.

If the work has more than six authors, list the first six authors and then use ellipses after the sixth author's name to indicate the rest of the authors. Then, state the final author's name.

Example: Merckx, V. S. F. T., Hendriks, K. P., Beentjes, K. K., Mennes, C. B., Becking, L. E., Peijnenburg, K. T. C. A. . . . Schilthuizen, M. (2015). Evolution of endemism on a young tropical mountain. *Nature*, *524*, 347-350.

#### b. Article in Journal Paginated by Volume

Journals that are paginated by volume begin with page one in issue one, and continue numbering issue two where issue one ended, etc.

#### Example:

Harlow, H. F. (1983). Fundamentals for Preparing Psychology Journal Articles. *Journal of Comparative and Physiological Psychology*, 55, 893-896.

#### c. Article in Journal Paginated by Issue

Journals paginated by issue begin with page one every issue; therefore, the issue number gets indicated in parentheses after the volume. The parentheses and issue number are not italicized or underlined.

#### Example:

Scruton, R. (1996). The Eclipse of Listening. The New Criterion, 15(30), 5-13.

#### d. Article in Magazine

#### Example:

Henry, W. A., III. (1990, April 9). Making the Grade in Today's Schools. *Time*, 135, 28-31.

#### e. Article in a Newspaper

Unlike other periodicals, p. or pp. precedes page numbers for a newspaper reference in APA style. Single pages take p., e.g., p. B2; multiple pages take pp., e.g., pp. B2, B4 or pp. C1, C3-C4.

#### Example:

Schultz, S. (2005, December 28). Calls Made To Strengthen State Energy Policies. *The Country Today,* pp. 1A, 2A.

#### f. Letter to the Editor

#### Example:

Moller, G. (2002, August). Ripples Versus Rumbles [Letter to the editor]. *Scientific American*, 287(2), 12.

#### 4.4.2 Books

#### a. Basic Format for Books

Author, A. A. (Year of publication). *Title of work*: Capital letter also for subtitle. Location: Publisher.

\*Note: For "Location," you should always list the city, but you should also include the state if the city is unfamiliar or if the city could be confused with one in another state.

#### Example:

Calfee, R. C., & Valencia, R. R. (1991). *APA guide to preparing manuscripts for journal publication*. Washington, DC: American Psychological Association.

Shotton, M. A. (1989). *Computer Addiction? A Study of Computer Dependency*. London, England: Taylor and Francis.

#### b. Edited Book, Without Author

#### Example:

Duncan, G.J., & Brooks-Gunn, J. (Eds.). (1997). *Consequences Of Growing Up Poor*. New York: Russell Sage Foundation.

#### c. Edited Book with an Author or Authors

#### Example:

Plath, S. (2000). The Unabridged Journals(K.V. Kukil, Ed.). New York: Anchor.

#### d. A Translation

#### Example:

Laplace, P. S. (1951). *A Philosophical Essay on Probabilities*(F. W. Truscott & F. L. Emory, Trans.). New York: Dover. (Original work published 1814)

\*Note: When you cite a republished work, like the one above, work in your text, it should appear with both dates: Laplace (1814/1951).

#### e. <u>Edition Other Than the First</u>

#### Example:

Helfer, M.E., Keme, R.S., &Drugman, R.D. (1997). *The battered child* (5th ed.). Chicago: University of Chicago Press.

#### f. Article or Chapter in an Edited Book

Author, A. A., & Author, B. B. (Year of publication). Title of Chapter. In A.A. Editor & B.B.Editor (Eds.), *Title of Book*(pages of chapter). Location: Publisher.

\*Note: When you list the pages of the chapter or essay in parentheses after the book title, use "pp." before the numbers: (pp. 1-21). This abbreviation, however, does not appear before the page numbers in periodical references, except for newspapers.

#### Example:

O'Neil, J. M., & Egan, J. (1992). Men's and women's gender role journeys: Metaphor for healing, transition, and transformation. In B. R. Wainrib (Ed.), *Gender issues across the life cycle* (pp. 107-123). New York: Springer.

#### g. Multivolume Work

#### Example:

Wiener, P. (Ed.). (1973). *Dictionary of the History of Ideas* (Vols. 1-4). New York: Scribner's.

#### 4.4.3 Print Sources

#### a. An Entry in an Encyclopedia

#### Example:

Bergmann, P. G. (1993). *Relativity. In The New Encyclopedia Britannica* (Vol. 26, pp. 501-508). Chicago: Encyclopedia Britannica.

#### b. Work Discussed in a Secondary Source

List the source the work was discussed in:

#### Example:

Coltheart, M., Curtis, B., Atkins, P., & Haller, M. (1993). Models of reading aloud: Dual-route and parallel-distributed-processing approaches. *Psychological Review*, 100, 589-608.

\*Note: Give the secondary source in the references list; in the text, name the original work, and give a citation for the secondary source.

For example, if Seidenberg and McClelland's work is cited in Coltheart et al. and you did not read the original work, list the Coltheart et al. reference in the References. In the text, use the following citation:

In Seidenberg and McClelland's study (as cited in Coltheart, Curtis, Atkins, &Haller,1993),......

#### c. Dissertation Abstract

#### Example:

Yoshida, Y. (2001). *Essays In Urban Transportation* (Doctoral dissertation, Boston College, 2001). Dissertation Abstracts International, 62, 7741A.

#### d. Government Document

#### Example:

National Institute of Mental Health. (1990). *Clinical Training in Serious Mental Illness (DHHS Publication No. ADM 90-1679)*. Washington, DC: U.S. Government Printing Office.

#### e. Report from a Private Organization

#### Example:

American Psychiatric Association. (2000). *Practice Guidelines For The Treatment Of Patients With Eating Disorders* (2nd ed.). Washington, D.C.: Author.

#### f. Conference Proceedings

#### Example:

Schnase, J.L., & Cunnius, E.L. (Eds.). (1995). *Proceedings from CSCL '95: The First International Conference on Computer Support for Collaborative Learning.* Mahwah, NJ: Erlbaum.

#### 4.4.4 Electronic Sources

#### a. <u>Article from an Online Periodical</u>

Online articles follow the same guidelines for printed articles. Include all information the online host makes available, including an issue number in parentheses.

Author, A. A., & Author, B. B. (Date of publication). Title of article. Title of online periodical, volume number (issue number if available). Retrieved month day, year, from http://www.someaddress.com/full/url/

#### Example:

Bernstein, M. (2002). 10 tips on writing the living Web. A List Apart: For People Who Make Websites, 149. Retrieved May 2, 2006 from http://www.alistapart.com/articles/writeliving

#### b. Online Scholarly Journal Article

Author, A. A., & Author, B. B. (Date of publication). Title of article. *Title of journal, volume number.* Retrieved month day, year, from http://www.someaddress.com/full/url/

#### Example:

Kenneth, I. A. (2000). A Buddhist response to the nature of human rights. *Journal of Buddhist Ethics*, 8.Retrieved February 20, 2001, from http://www.cac.psu.edu/ibe/twocont.html

If the article appears as a printed version as well, the URL is not required. Use "Electronic version" in brackets after the articles title.

#### Example:

Whitmeyer, J.M. (2000). Power Through Appointment [Electronic version]. *Social Science Research*, 29, 535-555.

#### c. Article from a Database

When referencing material obtained from an online database (such as a database in the library), provide appropriate print citation information (formatted just like a "normal" print citation would be for that type of work). Then add information that gives the date of retrieval and the proper name of the database. This will allow people to retrieve the print version if they do not have access to the database from which you retrieved the article. You can also include the item number or accession number in parentheses at the end, but the APA manual says that this is not required.

#### Example:

Smyth, A. M., Parker, A. L., & Pease, D. L. (2002). A Study of Enjoyment Of Peas. *Journal of Abnormal Eating, 8(3).* Retrieved February 20, 2003, from PsycARTICLES database.

#### d. <u>Nonperiodical Web Document, Web Page, or Report</u>

List as much of the following information as possible (you sometimes have to hunt around to find the information; don't be lazy.

- If there is a page like <a href="http://www.somesite.com/somepage.htm">http://www.somesite.com/somepage.htm</a>, and somepage.htm doesn't have the information you're looking for, move up the URL to <a href="http://www.somesite.com/">http://www.somesite.com/</a>):
- Author, A. A., & Author, B. B. (Date of publication). Title of document. Retrieved month, date, year, from http://Web address.

\*Note: When an Internet document is more than one Web page, provide a URL that links to the home page or entry page for the document. Also, if there isn't a date available for the document use (n.d.) for no date.

#### e. Chapter or Section of a Web Document

Author, A. A., & Author, B. B. (Date of publication). Title of article. In Title of book or larger document (chapter or section number). Retrieved month day, year from http://www.someaddress.com/full/url/.

#### Example:

Engelshcall, R. S. (1997). Module mod\_rewrite: URL Rewriting Engine. In Apache HTTP Server Version 1.3 Documentation (Apache modules.) Retrieved March 10, 2006 from http://httpd.apache.org/docs/1.3/mod/mod rewrite.html

\*Note: Use a chapter or section identifier and provide a URL that links directly to the chapter section, not the home page of the Web site.

#### f. Personal Communication

E-mails, interviews, letters and all person-to-person communications are not included in the list of references, though you parenthetically cite them in your main text:

#### Example:

E. Robbins, personal communication, January 4, 2001

#### g. Online Forum or Discussion Board Posting

Message posted to an online newsgroup, forum, or discussion group. Include the title of the messsage, and the URL of the newsgroup or discussion board.

#### Example:

Frook, B. D. (1999, July 23). New Inventions In The Cyberworld Of Toylandia[Msg 25]. Message posted to http://groups.earthlink.com/forum/messages/00025.html

\*Note: If only the screen name is available for the author, then use the screen name; however, if the author provides a real name, use their real name instead. Be sure to provide the exact date of the posting. Follow the date with the subject line, the thread of the message (not in italics). Provide any identifiers in brackets after the title, as in other types of references.

# **A**PPENDICES

APPENDIX A: UMK/FSB/FYP-R-B1-SV (EDITION 2019)

Rubric form of Final Year Project Report Chapter 1, 2 & 3 (Supervisor)

APPENDIX B: UMK/FSB/FYP-R-C1-SV (EDITION 2019)

Rubric form of Final Report of Final Year Project (Supervisor)

APPENDIX B2: UMK/FSB/FYP-R-C1-SV (EDITION 2019)

Rubric form of Final Report of Final Year Project (Supervisor)

APPENDIX C: UMK/FSB/FYP-R-A-EX (EDITION 2018)

Rubric form of Proposal and Presentation of Final Year Project (Examiner)

APPENDIX D: UMK/FSB/FYP-R-C1-EX (EDITION 2019)

Rubric form of Final Report of Final Year Project (Examiner)

APPENDIX D2: UMK/FSB/FYP-R-C2-EX (EDITION 2019)

Rubric form of Final Report of Final Year Project (Examiner)

**APPENDIX E**: UMK/FSB/FYP-F1 (EDITION 2017)

Form of Titles of Final Year Project

**APPENDIX F**: UMK/FSB/FYP-F2 (EDITION 2017)

Final Year Project Changes Application Form

APPENDIX G: UMK/FSB/FYP-R-B1-COOR (EDITION 2018)

Rubric form of Final Year Project I (Coordinator)

**APPENDIX H**: UMK/FSB/FYP-F3 (EDITION 2017)

Submission form of Proposal / Report of Final Year Project for Evaluation / Re-Evaluation

APPENDIX I: UMK/FSB/FYP-F4 (EDITION 2023)

Checklist of Submission of Final Year Project

APPENDIX J: UMK/FSB/FYP-F5 (EDITION 2024)

Form of Final Year Project Complaint Form

#### APPENDIX K

Sample of numbering a chapter and sub-heading in a chapter

#### APPENDIX L

Sample of a table in the text

#### **APPENDIX M**

Sample of an illustration or a figure

#### **APPENDIX N**

Sample of research flow

#### **APPENDIX O**

Sample of Gantt Chart

#### **APPENDIX P**

Sample of Milestone

#### **APPENDIX Q**

Sample of a thesis front cover

#### **APPENDIX R**

Sample of a thesis spine

#### **APPENDIX S**

Example of a title page

#### **APPENDIX T**

Sample of a declaration page

#### **APPENDIX U**

Example of acknowledgement page

#### **APPENDIX V**

Example of an Abstract in English

#### **APPENDIX W**

Example of Abstrak in Bahasa Melayu

#### **APPENDIX X**

Sample of a Table of Contents page

#### **APPENDIX Y**

Example of a List of Tables

#### **APPENDIX Z**

Example of a List of Figures

#### **APPENDIX AA**

Example of List of Abbreviations

#### **APPENDIX AB**

Example of a List of Symbols

#### **APPENDIX AC**

Guideline for Full Report of the Final Year Geoscience Project 2024

#### **APPENDIX A**

Rubric form for Final Year Project Report Chapter 1, 2 & 3 (Supervisor)

#### UMK/FSB/FYP-R-B1-SV (EDITION 2019)



#### LAPORAN PROJEK PENYELIDIKAN TAHUN AKHIR BAB 1,2&3 (PENYELIA) FINAL YEAR PROJECT REPORT CHAPTER 1,2&3 (SUPERVISOR)

Nama Penuh (mengikut kad pengenalan/passport) Full Name (as identity card/ passport)	·
No. Matrik Pelajar : Student's Matric No	Fakulti/ Institut : Faculty/ Institute
Program Ijazah: Degree Programme	_

#### PART A (FINAL REPORT): 35% - CLO 3

#### a) TITLE

CRITERIA	RATING	WEIGHTAGE	SCORE
Informative, concise & clearly expressed.	Excellent (5)	0.5	
Relevant, concise & clearly expressed.	Good (4)		
Relevant but not concise & good expression	Moderate (3)		
Vague, not concise & poorly expressed.	Weak (2)		
Irrelevant & poorly expressed.	Very Weak (1)		
Omitted.	Poor (0)		

#### b) INTRODUCTION

CRITERIA	RATING	WEIGHTAGE	SCORE
Excellent coverage of research background. Problem statements, objectives and variables are specific and clearly and precisely defined. Scope of study satisfy the objectives and is clearly explained. Significance of the study is relevant, explicit and clearly described.	Excellent (5)	2.0	
Good coverage of research background Problem statements, objectives, and variables are specific and adequately defined. Scope of study partially fulfil the objectives and	Good (4)		

adequately explained.	
Significance of the study is clearly stated and	
focused.	
Moderate coverage of research background.	
Problem statements, objectives are identified but	
not clearly defined.	Madagata
Scope of study is too broad or not specific and	Moderate
poorly explained.	(3)
Significance of the study is not logically relevant	
to the problem.	
Poor coverage of research background.	
Problem statements and objectives are identified	
but not defined.	Weak
Scope of study does not fulfil the objectives.	(2)
Significance of the study is not clear, nor focused	
nor explicit.	
Inadequate coverage of research background.	
Problem statements and objectives are not	Very Weak
identified.	· · · · · · · · · · · · · · · · · · ·
Scope of study and significance of the study are	(1)
not clearly stated and irrelevant.	
Research background, problem statement, scope	Poor
of the study, and objectives are omitted.	(0)

c) LITERATURE REVIEW

CRITERIA	RATING	WEIGHTAGE	SCORE
Excellent literature review covers essential aspects related to issue/ problem, objectives, theory and methods.  Source from multiple, research based documents.  Sources are properly cited & in standardized /APA format  Narrative integrates critical and logical details from literatures.  Excellent synthesis and organization of literature that is clearly linked to research question.	Excellent (5)		
Good literature review covers essential aspects related to issue/ problem, objectives, theory and methods.  Source from multiple documents.  Sources are properly cited.  Good synthesis and organization of the literature, which is clearly linked to the research question.	Good (4)	2.0	
Adequate literature review covers generally essential aspects related to issue/ problem, objectives, theory and methods.  Source from limited number of documents.  Sources are cited but some are in improper format.  Moderate synthesis and organization of the literature, which minimally links it to the research question.  Selected literature are from unreliable sources.  Literally supports are vague and ambiguous.	Moderate (3)		

Minimal literature review, covers minimally on essential aspects related to issue/ problem, objectives, theory and methods. Source from single document. Sources are cited incorrectly. Poor synthesis and organization of the literature. The review of literature are missing of non-research based articles, irrelevant, inaccurate or inappropriate.	Weak (2)
Very little or fail to provide previous research background supporting issue/ problem, objectives, theory and methods.  No sources quoted.  Source is not cited.  Synthesis and organization is based on limited information. There is very poor link to the research question.	Very Weak (1)
Literature reviews are omitted	Poor (0)

d) MATERIALS AND METHODS

CRITERIA	RATING	WEIGHTAGE	SCORE
Valid and appropriate methods with comprehensive justifications.  Research methodology is clearly identified and coherently described in detail.  The context population and sampling strategy are fully described (quantitative and qualitative).  Instruments and observation protocols are clearly described in detail relevance to the research objectives.  Procedures for implementing the study (permissions, treatments, and data gathering) are fully identified and described.  Analytical methods (descriptive, inferential test, and significance level) are sufficiently specific, clear and appropriate.	Excellent (5)		333.112
Valid and appropriate methods but with limited justifications.  Research methodology is clearly identified and described with sufficient details.  The context, population and sampling strategy were adequately identified and described.  Instruments and observation protocols are clearly identified and described.  Procedures for implementing the study (permissions, treatments, and data gathering) are identified and described.  Descriptive and inferential methods are identified. Level of significance is stated.	Good (4)	2.0	
Valid and appropriate methods and without justifications. Research methodology is not clearly described or incomplete. The context, population or sampling strategy was	Moderate (3)		

confusing, little relevance to the research objective, incomplete or not identified.		
Instruments or observation protocols description		
is incomplete or of little relevance to the research		
objectives.		
Procedures (permissions, treatments and data		
gathering) lacked clarity.		
Descriptive or inferential methods are confusing,		
incomplete or lacked relevance to the research		
objectives.		
Valid but inappropriate methods without		
justifications.		
The research methodology is not identified nor		
described.		
The context, population or sampling strategy was		
poorly described.		
Description of the instruments is incomplete or	Weak	
lacked relevance to the research objectives.	(2)	
Observation protocol was not described.  Procedures (permissions, treatments and data		
gathering) were incomplete or lacked relevance to		
the research objectives.		
Analytical methods (descriptive, inferential test,		
and significance level) were inappropriately aligned		
with data and research objectives.		
Invalid and inappropriate methods and		1
justifications.		
Wrong methodology.		
The context, population or sample was not		
identified or described		
Instruments and observation protocols for data	Very Weak	
collection were not identified nor described.	(1)	
Procedures for treatments and gathering data		
were omitted		
Analytical methods (descriptive, inferential test,		
and significance level) are missing/not		
implemented.		-
Research design, sampling, instruments,	Poor	
procedures, data analysis based on the issues, the objectives and the scope of the study in the thesis	(0)	
are omitted.	(0)	
are officed.		1

#### e) REFERENCES

<u> </u>			
CRITERIA	RATING	WEIGHTAGE	SCORE
All the sources in the reference list are cited in the text vice versa, which follows the recommended style.	Excellent (5)		
Most of the sources in the reference list are cited in the text vice versa, which follows the recommended style.	Good (4)	0.5	
Only a few sources used are cited in the reference list vice versa, which follows the recommended style.	Moderate (3)		
Many sources are missing from the reference list	Weak		
vice versa and did not follow	(2)		

recommended style.	
Most of the sources are missing from the reference list vice versa and did not follow	Very Weak
recommended style.	(1)
No list of references.	Poor (0)

#### PART B (TECHNICAL FORMAT): 10% - CLO 2

a) FORMAT, STRUCTURE AND GRAMMAR

CRITERIA	RATING	WEIGHTAGE	SCORE
Well organized, demonstrates logical sequencing and structure.  All paragraphs within a section flow well from one to the next.  Consistently complied with UMK-FSB guidelines.  No grammatical, spelling or punctuation errors.	Excellent (5)		
Organized and demonstrates logical sequencing and structure.  Paragraphs within a section generally flow well from one to the next.  Mostly complied with UMK-FSB guidelines.  Very little grammatical, spelling or punctuation errors.	Good (4)		
Organized but demonstrates illogical sequencing or structure.  Paragraphs within a section flow somewhat from one to the next.  Sparingly complied with UMK-FSB guidelines.  Few grammatical, spelling or punctuation errors.	Moderate (3)	1.0	
Weakly organized with no logical sequencing or structure.  Paragraph within a section were disconnected.  Mostly does not comply with the UMK-FSB guidelines.  Many grammatical, spelling or punctuation errors.	Weak (2)		
No organization, sequencing or structure. Paragraphs within a section are not clear. Fail to comply with UMK-FSB guidelines. Too many grammatical, spelling or punctuation errors.	Very Weak (1)		
No paragraphs within a section. Fail to comply with UMK-FSB guidelines. Too many grammatical, spelling or punctuation errors.	Poor (0)		

b) CLARITY AND CONTINUITY IN WRITING

b) CLARITI AND CONTINUITI IN WRITING	3		
CRITERIA	RATING	WEIGHTAGE	SCORE
Able to write very well, concisely and clearly. Elegantly organized with respect to both the whole thesis and the coherence and continuity of paragraphs. Accommodates the complexity of the argument imaginatively.	Excellent (5)	1.0	
Able to write well and clearly.	Good		
Well organized throughout but without elegance	(4)		

and complexity.	
Accomodates the argument satisfactorily.	
Able to write clearly but require some	
improvements.	
well organized on the whole but occasionally	Moderate
needing work on individual paragraph coherence or	(3)
continuity.	
Accommodates the argument moderately.	
Writing is not clear and requires further	
improvements.	Weak
Organization is haphazard and the argument is	
difficult to follow. Paragraph coherence and	(2)
continuity need work.	
Writing is not clear and requires a lot of	.,,
improvements.	Very Weak
No continuity in writing.	(1)
No continuity in writing.	Daar
Unable to write ideas and no continuity in writing.	Poor
,	(0)

## PART C (SUPERVISION): 15% - CLO 4 a) WORK RESPONSIBILITY

CRITERIA	RATING	WEIGHTAGE	SCORE
Completes work on time and is punctual.  When asking for advice to supervisor, states what already has been tried.  Carry out the task given beyond the scope of work set and beyond expectations.	Excellent (5)		
Regularly work on time and is punctual. Regularly asks for advice when needed. Carry out the task given beyond the scope of work beyond expectations.	Good (4)		
Regularly takes actions, always uses his or her time wisely. Sometimes knows when advice is needed and asks. Carry out the tasks given in accordance with the scope of work and meet expectations.	Moderate (3)	1.0	
Displays lack of interest or pride in their work.  Dose not always manage time wisely.  Do not know when advice is needed and do not asks.  Carry out the tasks assigned in accordance with scope of work with supervision.	Weak (2)		
Rarely manages time wisley.  Does not ask for or accept advice.  Do not perform the task given even with supervision.  Fails to manage time wisely.	Very Weak (1)		
Never ask for or accept advice.	(0)		

#### b) ACADEMIC DISCUSSION WITH SUPERVISOR

CRITERIA	RATING	WEIGHTAGE	SCORE
Discusses progress with their supervisor more than 10 times through various communication channels supported by Progress Report link.	Excellent (5)	1.0	

Discusses progress with their supervisor at least 10 times through various communication channels supported by Progress Report link.	Good (4)
Discusses progress with their supervisor at least 7 times through various communication channels supported by Progress Report link.	Moderate (3)
Discusses progress with their supervisor at least 5 times through various communication channels supported by Progress Report link.	Weak (2)
Discusses progress with their supervisor less than 5 times through various communication channels supported by Progress Report link.	Very Weak (1)
Never discusses progress with their supervisor. Students never do anything as constructed by supervisor.	Poor (0)

#### c) MORAL

CRITERIA	RATING	WEIGHTAGE	SCORE
Student always practices good values and	Excellent		
behave decently with supervisor in any situation.	(5)		
Student practices good values and behave	Good		
decently with supervisor in most situations.	(4)		
Student practices good values and behave	Moderate		
decently with supervisor in many situations.	(3)		
Student practices good values or behave	Weak	1.0	
decently with supervisor only in some situations.	(2)		
Student has once behaved nicely with supervisor.	Very Weak (1)		
Student doesn't practice good values or does not behave decently with supervisor in any situation as it should be.	Poor (0)		

Comments and Recommendations:				
0: 4				
Signature	:		•	
Name	:			
Date	:			

TOTAL MARKS:	
	60

#### **APPENDIX B**

Rubric form for Final Report of Final Year Project (Supervisor)

#### UMK/FSB/FYP-R-C1-SV (EDITION 2019)



# LAPORAN AKHIR PROJEK PENYELIDIKAN TAHUN AKHIR (PENYELIA) FINAL REPORT OF FINAL YEAR PROJECT (SUPERVISOR)

Nama Penuh (mengikut kad pengenalan/passport) Full Name (as identity card/ passport)	i
No. Matrik Pelajar : Student's Matric No	Fakulti/ Institut : Faculty/ Institute
Program Ijazah: Degree Programme	_

#### PART A (FINAL REPORT): 30% - CLO 1

#### (a) TITLE & ABSTRACT

CRITERIA	RATING	WEIGHTAGE	SCORE
Informative, concise & clearly expressed.  Detail and specific description on the issues, variables, context and methods of study.  Provide relevant and specific results and conclusions.	Excellent (5)		
Relevant, concise & clearly expressed.  Detail description of the issues, variables, context, and methods of study.  Provide relevant results and conclusions.	Good (4)		
Relevant but not concise & good expression Sketchy description of issues, variables, context and methods of study. Provide results and conclusions.	Moderate (3)	0.5	
Vague, not concise & poorly expressed. Inappropriate problem, research questions and method of the study. Provide insufficient results and conclusions.	Weak (2)		
Irrelevant & poorly expressed. Includes a summary of the problem, research questions and method of the study. Not provide results and conclusions.	Very Weak (1)		
Omitted.	Poor (0)		

#### (b) INTRODUCTION

(2)			
CRITERIA	RATING	WEIGHTAGE	SCORE

Excellent coverage of research background. Problem statements, objectives and variables are specific and clearly and precisely defined. Scope of study satisfy the objectives and is clearly explained. Significance of the study is relevant, explicit and clearly described.	Excellent (5)		
Good coverage of research background Problem statements, objectives, and variables are specific and adequately defined. Scope of study partially fulfil the objectives and adequately explained. Significance of the study is clearly stated and focused.	Good (4)		
Moderate coverage of research background. Problem statements, objectives are identified but not clearly defined. Scope of study is too broad or not specific and poorly explained. Significance of the study is not logically relevant to the problem.	Moderate (3)	0.5	
Poor coverage of research background. Problem statements and objectives are identified but not defined. Scope of study does not fulfil the objectives. Significance of the study is not clear, nor focused nor explicit.	Weak (2)		
Inadequate coverage of research background. Problem statements and objectives are not identified. Scope of study and significance of the study are not clearly stated and irrelevant.	Very Weak (1)		
Research background, problem statement, scope of the study, and objectives are omitted.	Poor (0)		

#### (c) LITERATURE REVIEW

CRITERIA	RATING	WEIGHTAGE	SCORE
Excellent literature review covers essential aspects related to issue/ problem, objectives, theory and methods.  Source from multiple, research based documents.  Sources are properly cited & in standardized	Excellent (5)	WEIGHTAGE	333.112
/APA format Narrative integrates critical and logical details from literatures. Excellent synthesis and organization of literature that is clearly linked to research question.	,,	0.5	
Good literature review covers essential aspects related to issue/ problem, objectives, theory and methods.  Source from multiple documents.  Sources are properly cited.  Good synthesis and organization of the literature, which is clearly linked to the research question.	Good (4)		

Adequate literature review covers generally essential aspects related to issue/ problem, objectives, theory and methods.  Source from limited number of documents.  Sources are cited but some are in improper format.  Moderate synthesis and organization of the literature, which minimally links it to the research question.  Selected literature was from unreliable sources.  Literally supports were vague and ambiguous.	Moderate (3)
Minimal literature review, covers minimally on essential aspects related to issue/ problem, objectives, theory and methods.  Source from single document.  Sources are cited incorrectly.  Poor synthesis and organization of the literature.  The review of literature was missing of non-research based articles, irrelevant, inaccurate or inappropriate.	Weak (2)
Very little or fail to provide previous research background supporting issue/ problem, objectives, theory and methods.  No sources quoted.  Source is not cited.  Synthesis and organization is based on limited information. There is very poor link to the research question.	Very Weak (1)
Literature reviews are omitted	Poor (0)

(d) MATERIALS AND METHODS

(a) MATERIALS AND METHODS			
CRITERIA	RATING	WEIGHTAGE	SCORE
Valid and appropriate methods with comprehensive justifications. Research methodology is clearly identified and coherently described in detail. The context population and sampling strategy were fully described (quantitative and qualitative). Instruments and observation protocols were clearly identified and described in detail relevance to the research objectives. Procedures for implementing the study (permissions, treatments, and data gathering) were fully identified and described. Analytical methods (descriptive, inferential test, and significance level) were sufficiently specific, clear and appropriate.	Excellent (5)	1.0	
Valid and appropriate methods but with limited justifications. Research methodology is clearly identified and described with sufficient details. The context, population and sampling strategy were adequately identified and described. Instruments and observation protocols were	Good (4)		

#### (e) RESULTS AND DISCUSSIONS

(e) RESULTS AND DISCUSSIONS			
CRITERIA	RATING	WEIGHTAGE	SCORE
Excellent presentation, explanation and evaluation of results.  Have a very good quality and trustworthy data, with excellent presentation.  Excellent discussions on findings and data interpretations.	Excellent (5)		
Good presentation, explanation and evaluation of results.  Have good quality and mostly trustworthy data, with good presentation.  Good discussions on findings and data interpretations.	Good (4)		
Sufficient quality of presentation, explanation and evaluation of results.  Insufficient and slightly doubtful data, with moderate presentation.  Sufficient discussions on findings and data interpretations.	Moderate (3)	2.0	
Moderate presentation, explanation and evaluation of results.  Insufficient and mostly doubtful data with poor presentation.  Moderate discussions on findings and data interpretations.	Weak (2)		
Poor presentation, explanation and evaluation of results.  Insufficient and non- trustworthy data, with inappropriate presentation.  Poor discussions on findings and data interpretations.	Very Weak (1)		
No explanation or evaluation of the results.  No worthy data, and bad presentation  No discussion on findings and very poor data interpretation.	Poor (0)		

#### (f) CONCLUSION

CRITERIA	RATING	WEIGHTAGE	SCORE
Conclusion addresses the research objectives			
and based on the work done.	Excellent		
Conclusions were supported by relevant results,	(5)		
and presented concisely in logical sequence.			
Conclusion addresses the research objectives			
and based on the work done.	Good	0.5	
Conclusions were supported by relevant results,	(4)	0.5	
but not presented in logical sequence.			
Conclusion addresses the research objectives			
and based on the work done.	Moderate		
Conclusions were mostly concise but with some	(3)		
vagueness in wording.			

Conclusion addresses the research objectives and based on the work done.  Some conclusions are not supported by results or merely repeat results	Weak (2)
Conclusion addresses the research objectives and based on the work done.  Conclusions merely repeat the results.	Very Weak (1)
Conclusion was omitted.	Poor (0)

(g) RECOMMENDATION

CRITERIA	RATING	WEIGHTAGE	SCORE
Recommendations are to the-point, well-linked to			
the conclusions, original and are extensive enough	Excellent		
to serve as project description for a new	(5)		
thesis project.			
Recommendations are to-the point, well-linked to	Good		
the conclusions and original.	(4)		
Recommendations are well-linked to the	Moderate	0.5	
conclusions	(3)	0.5	
Some recommendations are given, but the link to	Weak		
the conclusions is unclear.	(2)		
Recommendations are trivial.	Very Weak		
Recommendations are trivial.	(1)		
No Recommendations.	Poor		
NO NECOMMENDATIONS.	(0)		

#### (h) REFERENCES

(II) KEI EKENOES			
CRITERIA	RATING	WEIGHTAGE	SCORE
All the sources in the reference list are cited in the text vice versa, which follows the recommended style.	Excellent (5)		
Most of the sources in the reference list are cited in the text vice versa, which follows the recommended style.	Good (4)		
Only a few sources used are cited in the reference list vice versa, which follows the recommended style.	Moderate (3)	0.5	
Many sources are missing from the reference list vice versa and did not follow recommended style.	Weak (2)		
Most of the sources are missing from the reference list vice versa and did not follow recommended style.	Very Weak (1)		
No list of references.	Poor (0)		

#### PART B (TECHINCAL FORMAT): 5% - CLO 3

#### a) FORMAT STRUCTURE AND GRAMMAR

CRITERIA	RATING	WEIGHTAGE	SCORE
Well organized, demonstrates logical sequencing			
and structure.	Excellent	0.5	
All paragraphs within a section flow well from one	(5)	0.5	
to the next.			

Consistently commised with LIMIZ FCD availables as	
Consistently complied with UMK-FSB guidelines.	
No grammatical, spelling or punctuation errors.	
Organized and demonstrates logical sequencing	
and structure.	
Paragraphs within a section generally flow well	Good
from one to the next.	(4)
Mostly complied with UMK-FSB guidelines.	( - /
Very little grammatical, spelling or punctuation	
errors.	
Organized but demonstrates illogical sequencing	
or structure.	
Paragraphs within a section flow somewhat from	Moderate
one to the next.	(3)
Sparingly complied with UMK-FSB guidelines.	
Few grammatical, spelling or punctuation errors	
Weakly organized with no logical sequencing or	
structure.	
Paragraph within a section were disconnected.	Weak
Mostly does not comply with the UMK- FSB	(2)
guidelines.	(2)
Many grammatical, spelling, or punctuation	
errors.	
No organization, sequencing, or structure.	
Paragraphs within a section do not clear.	Very Weak
Fail to comply with UMK-FSB guidelines.	_
Too many grammatical, spelling, or punctuation	(1)
errors.	
No paragraphs within a section.	
Fail to comply with UMK-FSB guidelines.	Poor
Too many grammatical, spelling, or punctuation	(0)
errors.	

#### b) CLARITY AND CONTINUITY IN WRITING

CRITERIA	RATING	WEIGHTAGE	SCORE
Able to write very well, concisely and clearly. Elegantly organized with respect to both the whole thesis and the coherence and continuity of paragraphs.  Accommodates the complexity of the argument imaginatively.	Excellent (5)		
Able to write well and clearly.  Well organized throughout but without elegance and complexity.  Accommodates the argument satisfactorily.	Good (4)	0.5	
Able to write clearly but require some improvements.  Well organized on the whole but occasionally needing work on individual paragraph coherence or continuity.  Accommodates the argument moderately.	Moderate (3)		
Writing is not clear and requires further improvements. Organization is haphazard and the argument is	Weak (2)		

difficult to follow.		
Paragraph coherence and continuity need work.		
Writing is not clear and requires a lot of improvements.  No continuity in writing.	Very Weak (1)	
Unable to write ideas and no continuity in writing.	Poor (0)	

#### PART C (SUPERVISION): 15% - CLO 4 a) WORK RESPONSIBILITY

CRITERIA	RATING	WEIGHTAGE	SCORE
Completes work on time and is punctual.  When asking for advice to supervisor, states what already has been tried.  Carry out the task given beyond the scope of work set and beyond expectations.	Excellent (5)		
Regularly work on time and is punctual. Regularly asks for advice when needed. Carry out the tasks given in the scope of work beyond expectations.	Good (4)		
Regularly takes actions, always uses his or her time wisely.  Sometimes knows when advice is needed and asks.  Carry out the tasks given in accordance with the scope of work and meet expectations.	Moderate (3)	1.0	
Displays lack of interest or pride in their work.  Does not always manage time wisely.  Do not know when advice is needed and do not ask.  Carry out tasks assigned in accordance with scope of work with supervision.	Weak (2)		
Rarely manages time wisely.  Does not ask for or accept advice.  Do not perform the task given even with supervision.  Fails to manage time wisely.  Never ask for or accept advice	Very Weak (1) Poor (0)		

#### b) ACADEMIC DISCUSSION WITH SUPERVISOR

CRITERIA	RATING	WEIGHTAGE	SCORE
Discusses progress with their supervisor more than 10 times through various communication channels supported by progress report link.	Excellent (5)		
Discusses progress with their supervisor at least 10 times through various communication channels supported by progress report link.	Good (4)	1.0	
Discusses progress with their supervisor at least 7 times through various communication channels supported by progress report link.	Moderate (3)		

Discusses progress with their supervisor <b>at least 5 times</b> through various communication channels supported by progress report link.	Weak (2)
Discusses progress with their supervisor <b>less</b> than 5 times through various communication channels supported by progress report link.	Very Weak (1)
Never discusses progress with their supervisor. Students never do anything as constructed by supervisor.	Poor (0)

#### c) MORAL AND ETHICS

CRITERIA	RATING	WEIGHTAGE	SCORE
Student always practices good values and	Excellent		
behave decently with supervisor in any situation.	(5)		
Student practices good values and behave	Good		
decently with supervisor in most situations.	(4)		
Student practices good values and behave	Moderate		
decently with supervisor in many situations	(3)		
Student practices good values or behave	Weak		
decently with supervisor only in some situation	(2)		
Student has once behaved nicely with supervisor	Very Weak (1)	1.0	
Student does not practice good values or does	Poor		
not behave decently with supervisor in any situation	(0)		
as it should be	(3)		

# PART D (LAB WORK CONDUCT / FIELDWORK CONDUCT):10% a) METHODS /MATERIALS HANDLING

CRITERIA	RATING	WEIGHTAGE	SCORE
Has the ability to use the techniques, skills and tools without assistance confidently at laboratory or/and fieldwork.  Utilize the experimental apparatus/equipment creatively and innovatively.	Excellent (5)		
Has the ability to use the techniques, skills and tools without assistance confidently at laboratory or/and fieldwork	Good (4)		
Understand the apparatus' or equipment's method principle but lack of techniques and skills at laboratory or/and fieldwork.	Moderate (3)	1.0	
Not confident in utilizing the apparatus/equipment but can perform the experiments on their own at laboratory or/and fieldwork. Need some assistance.	Weak (2)		
Not confident at all in utilizing the apparatus/equipment. Need assistance continuously	Very Weak (1)		
Unable to use any apparatus/equipment at laboratory or/and fieldwork	Poor (0)		

#### b) SAFETY WORK PROCEDURE

CRITERIA	RATING	WEIGHTAGE	SCORE
Excellent in organizing and perform experiment, follow correct safety procedure in laboratory or/and fieldwork.  Always follow the dress code.	Excellent (5)		
Good in organizing and perform experiment, follow correct safety procedure in laboratory or/and fieldwork.  Always follow the dress code.	Good (4)		
Moderate skill in organizing and perform experiment, follow correct safety procedure it lab.  Do not follow the dress code.	Moderate (3)		
Weak in organizing and perform experiment, follow correct safety procedure in lab.  Do not follow the dress code.	Weak (2)	1.0	
Poor in organizing and perform experiment, follow correct safety procedure in laboratory or/and fieldwork.  •Do not follow the dress code. Do not plan work effectively	Very Weak (1)		
Need fully supervision. Unsafe work procedure. Fail to identify the important information in laboratory or/and fieldwork.  •Do not follow the dress code of workplace.	Poor (0)		

# Comments and Recommendations: Signature: Name: Date:

TOTAL MARKS:	
	60

#### **APPENDIX B2**

Rubric form of Final Report of Final Year Project (Supervisor)

#### UMK/FSB/FYP-R-C2-SV (EDITION 2019)



# LAPORAN AKHIR PROJEK PENYELIDIKAN TAHUN AKHIR (PENYELIA) FINAL REPORT OF FINAL YEAR PROJECT (SUPERVISOR)

Nama Penuh (mengikut kad pengenalan/passport) Full Name (as identity card/ passport)	:
No. Matrik Pelajar : Student's Matric No	Fakulti/ Institut : Faculty/ Institute
Program Ijazah: Degree Programme	_

#### PART A (FINAL REPORT):30% - CLO 1

#### (a) TITLE & ABSTRACT

CRITERIA	RATING	WEIGHTAGE	SCORE
Informative, concise & clearly expressed.  Detail and specific description on the issues, variables, context and methods of study.  Provide relevant and specific results and conclusions.	Excellent (5)		
Relevant, concise & clearly expressed.  Detail description of the issues, variables, context, and methods of study.  Provide relevant results and conclusions.	Good (4)		
Relevant but not concise & good expression Sketchy description of issues, variables, context and methods of study. Provide relevant results and conclusions.	Moderate (3)	2.5	
Vague, not concise & poorly expressed. Inappropriate problem, research questions and method of the study. Provide insufficient results and conclusions.	Weak (2)		
Irrelevant & poorly expressed. Includes a summary of the problem, research questions and method of the study. Not provide results and conclusions.	Very Weak (1)		
Omitted.	Poor (0)		

#### (b) CHAPTER 1 (INTRODUCTION)

CRITERIA	RATING	WEIGHTAGE	SCORE
Excellent coverage of research background.			
Problem statements, objectives and variables are	Excellent	2.5	
specific and clearly and precisely defined.	(5)	2.5	
Scope of study satisfy the objectives and is			

clearly explained. Significance of the study is relevant, explicit and clearly described. All elements are supported by literature. Good coverage of research background Problem statements, objectives, and variables	
are specific and adequately defined.  Scope of study partially fulfil the objectives and adequately explained.  Significance of the study is clearly stated and focused.  Connections are established with the literature.	Good (4)
Moderate coverage of research background. Problem statements, objectives are identified but not clearly defined. Scope of study is too broad or not specific and poorly explained. Significance of the study is not logically relevant to the problem. Connections to the literature are unclear or debatable.	Moderate (3)
Poor coverage of research background. Problem statements and objectives are identified but not defined. Scope of study does not fulfil the objectives. Significance of the study is not clear, nor focused nor explicit.	Weak (2)
Inadequate coverage of research background. Problem statements and objectives are not identified. Scope of study and significance of the study are not clearly stated and irrelevant.	Very Weak (1)
Research background, problem statement, scope of the study, and objectives are omitted.	Poor (0)

#### (c) CHAPTER 2 (LITERATURE REVIEW)

CRITERIA	RATING	WEIGHTAGE	SCORE
Excellent literature review covers essential aspects related to issue/ problem, objectives, theory			
and methods.  Source from multiple, research based			
documents.			
Detail conclusions based on evidence cited.	Excellent		
Sources are properly cited & in standardized	(5)		
/APA format			
Narrative integrates critical and logical details		2.5	
from literatures.			
Excellent synthesis and organization of literature			
that is clearly linked to research question.			
Good literature review covers essential aspects			
related to issue/ problem, objectives, theory and methods.	Good		
Source from multiple documents.	(4)		
Conclusions based on evidence cited.	(+)		
Sources are properly cited.			

Good synthesis and organization of the literature, which is clearly linked to the research question.		
Adequate literature review covers generally essential aspects related to issue/ problem, objectives, theory and methods.  Source from limited number of documents.  Some conclusions based on evidence cited.  Sources are cited but some are in improper format.  Moderate synthesis and organization of the literature, which minimally links it to the research question.  Selected literature was from unreliable sources.  Literally supports were vague and ambiguous.	Moderate (3)	
Minimal literature review, covers minimally on essential aspects related to issue/ problem, objectives, theory and methods. Source from single document. Only one conclusion based on evidence cited. Sources are cited incorrectly. Poor synthesis and organization of the literature. The review of literature was missing of nonresearch based articles, irrelevant, inaccurate or inappropriate.	Weak (2)	
Very little or fail to provide previous research background supporting issue/ problem, objectives, theory and methods.  No sources quoted.  No conclusion given.  Source is not cited.  Synthesis and organization is based on limited information. There is very poor link to the research question.	Very Weak (1)	
Literature reviews are omitted	Poor (0)	

(d) CHAPTER 3 (MATERIALS & METHOD)

(d) OTAL TER S (MATERIALS & METHOD)			
CRITERIA	RATING	WEIGHTAGE	SCORE
Valid and appropriate methods with comprehensive justifications. Research methodology is clearly identified and coherently described in detail. Assumptions & limitations are clearly stated. The context population and sampling strategy were fully described (quantitative and qualitative). Instruments and observation protocols were clearly identified and described in detail relevance to the research objectives. Procedures for implementing the study (permissions, treatments, and data gathering) were fully identified and described. Analytical methods (descriptive, inferential test, and significance level) were sufficiently specific,	Excellent (5)	WEIGHTAGE 5.0	SCORE
clear and appropriate.	0		
Valid and appropriate methods but with limited	Good		

justifications.	(4)	
Research methodology is clearly identified and		
described with sufficient details.		
Some limitations and assumptions have been		
identified.		
The context, population and sampling strategy		
were adequately identified and described.		
Instruments and observation protocols were		
clearly identified and described relevance to the		
research objectives.		
I		
(permissions, treatments, and data gathering) were		
identified and described.		
Descriptive and inferential methods were		
identified. Level of significance was stated		
Valid and appropriate methods and without		
justifications.		
Research methodology is not clearly described or		
incomplete.		
Important limitations and assumptions have not		
been identified.		
The context, population or sampling strategy was		
confusing, little relevance to the research objective,	Moderate	
incomplete or not identified.		
Instruments or observation protocols description	(3)	
was incomplete or of little relevance to the research		
objectives.		
Procedures (permissions, treatments and data		
gathering) lacked clarity.		
Descriptive or inferential methods were		
confusing, incomplete or lacked relevance to the		
research objectives.		
Valid but inappropriate methods without		
justifications.		
The research methodology is not identified nor		
described.		
Limitations and assumptions are omitted.		
The context, population or sampling strategy was		
poorly described.	\Mask	
Description of the instruments is incomplete or	Weak	
lacked relevance to the research objectives.	(2)	
Observation protocol was not described.		
Procedures (permissions, treatments and data		
gathering) were incomplete or lacked relevance to		
the research objectives.		
Analytical methods (descriptive, inferential test,		
and significance level) were inappropriately aligned		
with data and research objectives.		
Invalid and inappropriate methods and		
justifications.		
Wrong methodology.		
The context, population or sample was not	Very Weak	
identified or described	(1)	
Instruments and observation protocols for data		
collection were not identified nor described.		
Procedures for treatments and gathering data		

were omitted Analytical methods (descriptive, inferential test, and significance level) were missing/not implemented.	
Research design, sampling, instruments, procedures, data analysis based on the issues, the objectives of the study, and what to achieve in the thesis are omitted.	Poor (0)

(e) CHAPTER 4 (RESULTS AND DISCUSSION- MAPPING)

(e) CHAPTER 4 (RESULTS AND DISCUSSION- MA			
CRITERIA	RATING	WEIGHTAGE	SCORE
All part of geology in the study area (general geology, structural geology and petrography, etc) is well explained.			
Able to produce excellent geological map of the	Excellent		
study area.	(5)		
Able to provide correct symbols and for			
interpretation of structural features, contacts, cross section/s, legend, coordinates, etc.			
Most part of geology in the study area tasks (general geology, structural geology and			
petrography, etc.) is well explained.  Able to produce very good geological map of the study area.	Good (4)		
Able to provide correct symbols and markings for	(-)		
interpretation of structural features, contacts, cross			
section/s, legend, coordinates, etc.			
Some parts of geology in the study area (general			
geology, structural geology and petrography, etc.)			
are well explained.			
Able to produce good geological map of the study	Moderate		
area.	(3)		
Able to provide several symbols and markings		5.0	
are used for interpretation of structural features,			
contacts, cross section/s, legend, coordinates, etc.			
Many part of geology in the study area (general			
geology, structural geology and petrography, etc.) are not well explained.			
Able to produce poor geological map of the study	Weak		
area.	(2)		
Only able to provide very few symbols and	(-)		
markings for interpretation of structural features,			
contacts, cross section/s, legend, coordinates, etc.			
Fail to provide the explanation of the geology in			
the study area (general geology, structural geology			
and petrography, etc)			
Able to produce very poor geological map of the	Very Weak		
study area.	(1)		
No symbols and markings for interpretation of			
structural features, contacts, cross section/s,			
legend, coordinates, etc.			
No explanation of the geology in the study area (general geology, structural geology and	Door.		
(general geology, structural geology and petrography, etc)	Poor (0)		
Unable to produce geological map of the study	(0)		
Chable to produce geological map of the study			

area.		
No symbols and markings for interpretation of		
structural features, contacts, cross section/s,		
legend, coordinates, etc.		

(f) CHAPTER 5 (SPECIFICATION)

(I) CHAPTER 5 (SPECIFICATION)			
CRITERIA	RATING	WEIGHTAGE	SCORE
Excellent presentation, explanation and evaluation of results.  Have a very good quality and trustworthy data, with excellent presentation.  Excellent discussions on findings and data interpretations.	Excellent (5)		
Good presentation, explanation and evaluation of results.  Have good quality and mostly trustworthy data, with good presentation.  Good discussions on findings and data interpretations.	Good (4)		
Sufficient quality of presentation, explanation and evaluation of results.  Insufficient and slightly doubtful data, with moderate presentation.  Sufficient discussions on findings and data interpretations.	Moderate (3)	5.0	
Moderate presentation, explanation and evaluation of results.  Insufficient and mostly doubtful data with poor presentation.  Moderate discussions on findings and data interpretations.	Weak (2)		
Poor presentation, explanation and evaluation of results.  Insufficient and non-trustworthy data, with inappropriate presentation.  Poor discussions on findings and data interpretations.	Very Weak (1)		
No explanation or evaluation of the results.  No worthy data, and bad presentation  No discussion on findings and very poor data interpretation.	Poor (0)		

(g) CONCLUSION

CRITERIA	RATING	WEIGHTAGE	SCORE
Conclusion addresses the research objectives			
and based on the work done.	Excellent		
Conclusions were supported by relevant results,	(5)		
and presented concisely in logical sequence.			
Conclusion addresses the research objectives			
and based on the work done.	Good	2.5	
Conclusions were supported by relevant results,	(4)		
but not presented in logical sequence.	, ,		
Conclusion addresses the research objectives	Moderate		
and based on the work done.			
Conclusions were mostly concise but with some	(3)		

vagueness in wording.	
Conclusion addresses the research objectives	
and based on the work done.	Weak
Some conclusions are not supported by results or	(2)
merely repeat results	
Conclusion addresses the research objectives	Vom. Wook
and based on the work done.	Very Weak
Conclusions merely repeat the results.	(1)
Conclusion was omitted.	Poor (0)

#### (h) RECOMMENDATION

(II) RESSIMILEREATION			
CRITERIA	RATING	WEIGHTAGE	SCORE
Recommendations are to the-point, well-linked to			
the conclusions, original and are extensive enough	Excellent		
to serve as project description for a new thesis	(5)		
project.			
Recommendations are to-the point, well-linked to	Good		
the conclusions and original.	(4)		
Recommendations are well-linked to the	Moderate	2.5	
conclusions	(3)	2.5	
Some recommendations are given, but the link to	Weak		
the conclusions is not always clear.	(2)		
Decemmendations are trivial	Very Weak		
Recommendations are trivial.	(1)		
No Recommendations.	Poor		
No Recommendations.	(0)		

#### (i) REFERENCES

(I) KEI EKENOES			
CRITERIA	RATING	WEIGHTAGE	SCORE
All the sources in the reference list are cited in the text vice versa, which follows the recommended style.	Excellent (5)		
Most of the sources in the reference list are cited in the text vice versa, which follows the recommended style.	Good (4)		
Only a few sources used are cited in the reference list vice versa, which follows the recommended style.	Moderate (3)	0.5	
Many sources are missing from the reference list vice versa and did not follow recommended style	Weak (2)		
Most of the sources are missing from the reference list vice versa and did not follow recommended style.	Very Weak (1)		
No list of references	Poor (0)		

#### PART B (TECHICAL FORMAT): 5% - CLO 3

#### a) FORMAT, STRUCTURE AND GRAMMAR

CRITERIA	RATING	WEIGHTAGE	SCORE
Well organized, demonstrates logical sequencing			
and structure.	Excellent		
All paragraphs within a section flow well from one	(5)		
to the next.			

	T .	ı	
Consistently complied with UMK-FSB guidelines.			
No grammatical, spelling or punctuation errors.			
Organized and demonstrates logical sequencing			
and structure.			
Paragraphs within a section generally flow well	Good		
from one to the next.	(4)		
Mostly complied with UMK-FSB guidelines.	(1)		
Very little grammatical, spelling or punctuation		_	
errors.		2.5	
Organized but demonstrates illogical sequencing			
or structure.			
Paragraphs within a section flow somewhat from	Moderate		
one to the next.	(3)		
Sparingly complied with UMK-FSB guidelines.			
Few grammatical, spelling or punctuation errors			
Weakly organized with no logical sequencing or			
structure.			
Paragraph within a section were disconnected.	Weak		
Mostly does not comply with the UMK-FSB	(2)		
guidelines.	(2)		
Many grammatical, spelling, or punctuation			
errors.			
No organization, sequencing, or structure.			
Paragraphs within a section do not clear.	Very Weak		
Fail to comply with UMK-FSB guidelines.	-		
Too many grammatical, spelling, or punctuation	(1)		
errors.			
No paragraphs within a section.			
Fail to comply with UMK-FSB guidelines.	Poor		
Too many grammatical, spelling, or punctuation	(0)		
errors.			

#### b) CLARITY AND CONTINUITY IN WRITING

CRITERIA	RATING	WEIGHTAGE	SCORE
Able to write very well, concisely and clearly. Elegantly organized with respect to both the whole thesis and the coherence and continuity of paragraphs.  Accommodates the complexity of the argument imaginatively	Excellent (5)		
Able to write well and clearly.  Well organized throughout but without elegance and complexity.  Accommodates the argument satisfactorily.	Good (4)	2.5	
Able to write clearly but require some improvements.  Well organized on the whole but occasionally needing work on individual paragraph coherence or continuity.  Accommodates the argument moderately.	Moderate (3)		
Writing is not clear and requires further improvements. Organization is haphazard and the argument is	Weak (2)		

difficult to follow.		
Paragraph coherence and continuity need work.		
Writing is not clear and requires a lot of improvements.  No continuity in writing.	Very Weak (1)	
Unable to write ideas and no continuity in writing.	Poor (0)	

## PART C (SUPERVISION): 15% - CLO 4 a) WORK RESPONSIBILITY

CRITERIA	RATING	WEIGHTAGE	SCORE
Completes work on time and is punctual.  When asking for advice to supervisor, states what already has been tried.  Carry out the task given beyond the scope of work set and beyond expectations.	Excellent (5)		
Regularly work on time and is punctual. Regularly asks for advice when needed. Carry out the tasks given in the scope of work beyond expectations.	Good (4)		
Regularly takes actions, always uses his or her time wisely.  Sometimes knows when advice is needed and asks.  Carry out the tasks given in accordance with the scope of work and meet expectations.	Moderate (3)	5.0	
Displays lack of interest or pride in their work.  Does not always manage time wisely.  Do not know when advice is needed and do not ask.  Carry out tasks assigned in accordance with scope of work with supervision.	Weak (2)		
Rarely manages time wisely.  Does not ask for or accept advice.  Do not perform the task given even with supervision.  Fails to manage time wisely.  Never ask for or accept advice	Very Weak (1) Poor (0)		

#### b) ACADEMIC DISCUSSION WITH SUPERVISOR

CRITERIA	RATING	WEIGHTAGE	SCORE
Discusses progress with their supervisor more than 10 times through various communication channels supported by progress report link.	Excellent (5)		
Discusses progress with their supervisor at least 10 times through various communication channels supported by progress report link.	Good (4)	5.0	
Discusses progress with their supervisor at least 7 times through various communication channels supported by progress report link.	Moderate (3)		
Discusses progress with their supervisor at least 5 times through various communication channels	Weak (2)		

supported by progress report link.		
Discusses progress with their supervisor less than 5 times through various communication channels supported by progress report link.	Very Weak (1)	
Never discusses progress with their supervisor. Students never do anything as constructed by supervisor.	Poor (0)	

#### c) MORAL

CRITERIA	RATING	WEIGHTAGE	SCORE
Student always practices good values and	Excellent		
behave decently with supervisor in any situation.	(5)		
Student practices good values and behave	Good		
decently with supervisor in most situations.	(4)		
Student practices good values and behave	Moderate		
decently with supervisor in many situations.	(3)		
Student practices good values or behave	Weak	5.0	
decently with supervisor only in some situations.	(2)		
Student has once behaved nicely with	Very Weak		
supervisor.	(1)		
Student doesn't practice good values or does	Poor		
not behave decently with supervisor in any			
situation as it should be.	(0)		

## PART D ((LAB WORK CONDUCT / FIELDWORK CONDUCT)): 10% - CLO 2 a) METHODS / MATERIALS HANDLING

CRITERIA	RATING	WEIGHTAGE	SCORE
Has the ability to use the techniques, skills and tools without assistance confidently at laboratory or/and fieldwork.  Utilize the experimental apparatus/equipment creatively and innovatively.	Excellent (5)		
Has the ability to use the techniques, skills and tools without assistance confidently at laboratory or/and fieldwork	Good (4)		
Understand the apparatus' or equipment's method principle but lack of techniques and skills at laboratory or/and fieldwork.	Moderate (3)	5.0	
Not confident in utilizing the apparatus/equipment but can perform the experiments on their own at laboratory or/and fieldwork. Need some assistance.	Weak (2)		
Not confident at all in utilizing the apparatus/equipment. Need assistance continuously	Very Weak (1)		
Unable to use any apparatus/equipment at laboratory or/and fieldwork	Poor (0)		

#### b) SAFETY WORK PROCEDURE

CRITERIA	RATING	WEIGHTAGE	SCORE
Excellent in organizing and perform experiment,			
follow correct safety procedure in laboratory or/and	Excellent		
fieldwork.	(5)		
Always follow the dress code.	, ,		

Good in organizing and perform experiment, follow correct safety procedure in laboratory or/and fieldwork.  Always follow the dress code.	Good (4)	5.0	
Moderate skill in organizing and perform experiment, follow correct safety procedure it lab.  Do not follow the dress code.	Moderate (3)		
Weak in organizing and perform experiment, follow correct safety procedure in lab.  Do not follow the dress code.	Weak (2)		
Poor in organizing and perform experiment, follow correct safety procedure in laboratory or/and fieldwork.  Do not follow the dress code. Do not plan work effectively	Very Weak (1)		
Need fully supervision. Unsafe work procedure. Fail to identify the important information in laboratory or/and fieldwork.  Do not follow the dress code of workplace.	Poor (0)		

Comments ar	d Recommenda	ations :		
Signature	:		 	
Name	:			
Date	:			

TOTAL MARKS: \_\_\_\_\_

#### **APPENDIX C**

Rubric form of Proposal and Presentation of Final Year Project (Examiner)

#### UMK/FSB/FYP-R-A-EX (EDITION 2018)



#### **CADANGAN DAN PEMBENTANGAN** PROJEK PENYELIDIKAN TAHUN AKHIR (PENILAI) PROPOSAL AND PRESENTATION OF FINAL YEAR PROJECT (EXAMINER)

Nama Penuh (mengikut kad pengenalan/passport) Full Name (as identity card/ passport)	:
No. Matrik Pelajar : Student's Matric No	Fakulti/ Institut : Faculty/ Institute
Program ljazah: Degree Programme	_

#### PART A: FINAL REPORT (20%) - CLO 1

a) TITLE & INTRODUCTION			
CRITERIA	RATING	WEIGHTAGE	SCORE
Title: Informative, concise & clearly expressed Introduction: Excellent coverage of research background. Problem statements, objectives and variables are specific and clearly and precisely defined. Scope of study satisfy the objectives and is clearly explained. Significance of the study is relevant, explicit and clearly described. Expected outcome is well structured.	Excellent (5)		
Title: Relevant, concise & clearly expressed Introduction: Good coverage of research background Problem statements, objectives, and variables are specific and adequately defined. Scope of study partially fulfil the objectives and adequately explained. Significance of the study is clearly stated and focused. Expected outcome is structured.	Good (4)	1.0	
Title: Relevant but not concise & good expression Introduction: Moderate coverage of research background. Problem statements, objectives are identified but not clearly defined. Scope of study is too broad or not specific and poorly explained. Significance of the study is not logically relevant	Moderate (3)		

to the problem.	
Expected outcome is moderately structured.	
Title :	
Vague, not concise & poorly expressed	
Introduction:	
Poor coverage of research background.	
Problem statements and objectives are identified	Weak
but not defined.	(2)
Scope of study does not fulfil the objectives.	
Significance of the study is not clear, nor focused	
nor explicit.	
Expected outcome is weakly structured.	
Title:	
Irrelevant & poorly expressed.	
Introduction:	
Inadequate coverage of research background.	Very Weak
Problem statements and objectives are not	(1)
identified.	` ,
Scope of study and significance of the study are	
not clearly stated and irrelevant.	
Expected outcome is poorly structured.	
Title: Omitted.	
Introduction:	Poor
Research background, problem statement, scope of the study, objectives and expected outcome are	(0)
omitted.	
omitted.	

b) LITERATURE REVIEW

CRITERIA	RATING	WEIGHTAGE	SCORE
Excellent literature review covers essential aspects related to issue/ problem, objectives, theory and methods.  Source from multiple, research based documents.  Sources are properly cited & in standardized /APA format  Narrative integrates critical and logical details from literatures.  Excellent synthesis and organization of literature that is clearly linked to research question.	Excellent (5)		
Good literature review covers essential aspects related to issue/ problem, objectives, theory and methods.  Source from multiple documents.  Sources are properly cited.  Good synthesis and organization of the literature, which is clearly linked to the research question.	Good (4)	1.0	
Adequate literature review covers generally essential aspects related to issue/ problem, objectives, theory and methods.  Source from limited number of documents.  Sources are cited but some are in improper format.  Moderate synthesis and organization of the literature, which minimally links it to the research	Moderate (3)		

question. Selected literature was from unreliable sources. Literally supports were vague and ambiguous	
Minimal literature review, covers minimally on essential aspects related to issue/ problem, objectives, theory and methods.  Source from single document.  Sources are cited incorrectly.  Poor synthesis and organization of the literature.  The review of literature was missing of non-research based articles, irrelevant, inaccurate or inappropriate.	Weak (2)
Very little or fail to provide previous research background supporting issue/ problem, objectives, theory and methods.  No sources quoted.  Source is not cited.  Synthesis and organization is based on limited information. There is very poor link to the research question.	Very Weak (1)
Literature reviews are omitted	Poor (0)

### c) MATERIALS AND METHODS

Excellent (5)	0.5	
Good (4)	<b>U.</b> 5	
	(5)	Good (4)

justifications.	(3)	
Research methodology is not clearly described or		
incomplete.		
The context, population or sampling strategy was		
confusing, little relevance to the research objective,		
incomplete or not identified.		
Instruments or observation protocols description		
was incomplete or of litle relevance to the research		
objectives.		
Procedures (permissions, treatments and data		
gathering) lacked clarity.		
Descriptive or inferential methods were confusing,		
incomplete or lacked relevance to the research		
objectives. Valid but inappropriate methods		
without justifications.		
The research methodology is not identified nor		
described.		
Limitations and assumptions are omitted.		
The context, population or sampling strategy was		
poorly described.  Description of the instruments is incomplete or		
lacked relevance to the research objectives.		
Observation protocol was not described.		
Procedures (permissions, treatments and data		
gathering) were incomplete or lacked relevance to		
the research objectives.		
Analytical methods (descriptive, inferential test,		
and significance level) were inappropriately aligned		
with data and research objectives.		
Valid but inappropriate methods without		
justifications.		
The research methodology is not identified nor		
described.		
Limitations and assumptions are omitted.		
The context, population or sampling strategy was		
poorly described.		
Description of the instruments is incomplete or	Weak	
lacked relevance to the research objectives.	(2)	
Observation protocol was not described.		
Procedures (permissions, treatments and data		
gathering) were incomplete or lacked relevance to		
the research objectives.		
Analytical methods (descriptive, inferential test,		
and significance level) were inappropriately aligned		
with data and research objectives.		
Invalid and inappropriate methods and		
justifications.		
Wrong methodology.		
The context, population or sample was not		
identified or described	Von Mast	
Instruments and observation protocols for data	Very Weak	
collection were not identified nor described.	(1)	
Procedures for treatments and gathering data		
were omitted		
Analytical methods (descriptive, inferential test,		
and significance level) were missing/not		

implemented.		
Research design, sampling, instruments, procedures, data analysis based on the issues, the objectives of the study, and what to achieve in the thesis are omitted.		

d) FLOWCHART

CRITERIA	RATING	WEIGHTAGE	SCORE
Display clear visual or graphic illustration of a process or system used to solve a problem or produce a product.  Display high level thinking and articulation abilities when numerous factors are involved in a good way.	Excellent (5)		
Display the most complete visual or graphic illustration of a process or system used to solve a problem or produce a product, but difficult to grade level of thinking and articulation abilities when numerous factors are involved.	Good (4)		
Display lacking visual or graphic illustration of a process or system used to solve a problem or produce a product, and high level thinking and articulation abilities when numerous factors are involved is not possible.	Moderate (3)	0.5	
Insufficient information in flowcharts to communicate the logic involved in a system; does not allow writing proficiency assessment.	Weak (2)		
Flow charts seem not reproducible due to students fail to displays original synthetic thinking.	Very Weak (1)		
Omitted	Poor (0)		

e) GANTT CHART & MILESTONE

CRITERIA	RATING	WEIGHTAGE	SCORE
Gantt chart & milestone are very clear, realistic and reflect the timeline. Gantt chart & milestone are well designed according to final year project deadlines.	Excellent (5)		
Gantt chart & milestone are realistic and reflect the timeline. Gantt chart & milestone are mostly well designed according to final year project deadlines.	Good (4)		
Gantt chart & milestone are too closely tied to the timeline.  Gantt chart & milestone are quite good designed according to final year project deadlines.	Moderate (3)	0.5	
Gantt chart & milestone are unrealistic, inflated, or inaccurate.  Gantt chart & milestone are occasionally designed according to final year project deadlines.	Weak (2)		
Gantt chart & milestone are unclear, unrealistic, inflated, or inaccurate.  Not considered the Gantt chart & milestone to complete the final year project.	Very Weak (1)		
Omitted	Poor		

(0)	
1 (0)	
1 (0)	
\ \ \ \ \ \ \	1

#### f) REFERENCES

CRITERIA	RATING	WEIGHTAGE	SCORE
All the sources in the reference list are cited in the text vice versa, which follows the recommended style.	Excellent (5)		
Most of the sources in the reference list are cited in the text vice versa, which follows the recommended style.	Good (4)		
Only a few sources used are cited in the reference list vice versa, which follows the recommended style.	Moderate (3)	0.5	
Many sources are missing from the reference list and did not follow recommended style.	Weak (2)		
Many sources are missing from the reference list vice versa and did not follow recommended style.	Very Weak (1)		
No list of references.	Poor (0)		

#### PART B: PRESENTATION EVALUATION (10%) - CLO 2

#### a) CONTENTS OF PRESENTATION

CRITERIA	RATING	WEIGHTAGE	SCORE
Major points (title, research background, problem statement, objectives, literature review, methodology, result & discussion, conclusion & recommendation) strongly supported with suitable detail.	Excellent (5)		
All major points (title, research background, problem statement, objectives, literature review, methodology, result & discussion, conclusion & recommendation) covered and explained clearly and correctly.	Good (4)		
Covers important points (title, research background, problem statement, objectives, literature review, methodology, result & discussion, conclusion & recommendation).  A few inaccurate or irrelevant points.	Moderate (3)	0.5	
Important points (title, research background, problem statement, objectives, literature review, methodology, result & discussion, conclusion & recommendation) covered only superficially.  No major error and misconception.	Weak (2)	0.5	
Loss of important points (title, research background, problem statement, objectives, literature review, methodology, result & discussion, conclusion & recommendation) and covered only superficially.  Major error and misconception.	Very Weak (1)		
All points (title, research background, problem statement, objectives, literature review, methodology, result & discussion, conclusion & recommendation) are omitted.	Poor (0)		

b) PRESENTATION SKILL

CRITERIA	RATING	WEIGHTAGE	SCORE
Excellent organization and preparation (eye contact, clear voice, pronunciation skill, well dressed, good time management).  Confident and relaxed in the whole presentation.  Engaging with audience	Excellent (5)		
Good organization and preparation (eye contact, clear voice, pronunciation skill, well dressed, good time management).  Confident in most parts of the presentation.  Attractive to audience	Good (4)		
Moderate organization and preparation (eye contact, clear voice, pronunciation skill, well dressed, good time management).  Confident in only some parts of the presentation.	Moderate (3)	0.5	
Basic organization and preparation (eye contact, clear voice, pronunciation skill, well dressed, good time management).  Lack of confidence in some parts of the presentation	Weak (2)		
Unorganized and lack of preparation (eye contact, clear voice, pronunciation skill, well dressed, good time management).  Very much lacking in confidence on the whole presentation	Very Weak (1)		
No confidence and eye contact, voice, pronunciation skill, dressed, time management are omitted	Poor (0)		

#### c) COMMUNICATION

CRITERIA	RATING	WEIGHTAGE	SCORE
Handle difficult question with ease and confidence.  Illustrative explanation.	Excellent (5)		
Answer all questions correctly and concisely.  Answers are uniformly good, and show knowledge beyond presentation.	Good (4)		
Answer most questions correctly.  Answers are uniformly good, both in substance and delivery.	Moderate (3)		
Answer half of question correctly. Sometimes need clarification. Answers are inconsitent, both in substance or delivery.	Weak (2)	0.5	
Answer at least one question correctly.  Need clarification.  Answers are low in quality, either in substance or delivery	Very Weak (1)		
Unable to answer all the questions	Poor (0)		

d) OVERALL EVALUATION

CRITERIA	RATING	WEIGHTAGE	SCORE
Able to generate new idea or ideas that have potential to be applied, have depth, quality and novel in nature in the project.	Excellent (5)		
Able to generate new ideas that are relevant and	Good		
appropriate in the project	(4)		
Able to generate new ideas with some help from	Moderate		
lecturer or colleagues in the project	(3)		
Able to generate a simple idea independently in	Weak		
the project.	(2)	0.5	
Not able to generate any new idea in research	Very Weak		
project.	(1)		
No idea.	Poor (0)		

Comments an	d Recommendations :	
Signature		
Name	:	_
Date	:	_

TOTAL MARKS: \_\_\_\_\_

#### **APPENDIX D**

Rubric form of Final Report of Final Year Project (Examiner)

#### UMK/FSB/FYP-R-C1-EX (EDITION 2019)



# LAPORAN AKHIR PROJEK PENYELIDIKAN TAHUN AKHIR (PEMERIKSA) FINAL REPORT OF FINAL YEAR PROJECT (EXAMINER)

Nama Penuh (mengikut kad pengenalan/passport) Full Name (as identity card/ passport)	:
No. Matrik Pelajar : Student's Matric No	Fakulti/ Institut : Faculty/ Institute
Program Ijazah: Degree Programme	_

#### PART A (FINAL REPORT): (30%) - CLO 1

#### (a) TITLE & ABSTRACT

CRITERIA	RATING	WEIGHTAGE	SCORE
Informative, concise & clearly expressed.  Detail and specific description on the issues, variables, context and methods of study.  Provide relevant and specific results and conclusions.	Excellent (5)		
Relevant, concise & clearly expressed.  Detail description of the issues, variables, context, and methods of study.  Provide relevant results and conclusions.	Good (4)		
Relevant but not concise & good expression Sketchy description of issues, variables, context and methods of study. Provide results and conclusions.	Moderate (3)	0.5	
Vague, not concise & poorly expressed. Inappropriate problem, research questions and method of the study. Provide less than enough data/evidence to back up summary of results.	Weak (2)		
Irrelevant & poorly expressed. Includes a summary of the problem, research questions and method of the study. Specific data/evidence to back up summary of results is not provided.	Very Weak (1)		
Omitted	Poor (0)		

#### (b) INTRODUCTION

CRITERIA	RATING	WEIGHTAGE	SCORE
Excellent coverage of research background. Problem statements, objectives and variables are specific and clearly and precisely defined.	Excellent (5)		

Scope of study satisfy the objectives and is clearly explained. Significance of the study is relevant, explicit and clearly described.			
Good coverage of research background Problem statements, objectives, and variables are specific and adequately defined. Scope of study partially fulfil the objectives and adequately explained. Significance of the study is clearly stated and focused.	Good (4)	0.5	
Moderate coverage of research background. Problem statements, objectives are identified but not clearly defined. Scope of study is too broad or not specific and poorly explained. Significance of the study is not logically relevant to the problem.	Moderate (3)		
Poor coverage of research background. Problem statements and objectives are identified but not defined. Scope of study does not fulfil the objectives. Significance of the study is not clear, nor focused nor explicit.	Weak (2)		
Inadequate coverage of research background. Problem statements and objectives are not identified. Scope of study and significance of the study are not clearly stated and irrelevant.	Very Weak (1)		
Research background, problem statement, scope of the study, and objectives are omitted.	Poor (0)		

#### (c) LITERATURE REVIEW

CRITERIA	RATING	WEIGHTAGE	SCORE
Excellent literature review covers essential aspects related to issue/ problem, objectives, theory and methods.  Source from multiple, research based documents.  Sources are properly cited & in standardized /APA format  Narrative integrates critical and logical details from literatures.  Excellent synthesis and organization of literature that is clearly linked to research question.	Excellent (5)	0.5	
Good literature review covers essential aspects related to issue/ problem, objectives, theory and methods.  Source from multiple documents.  Sources are properly cited.  Good synthesis and organization of the literature, which is clearly linked to the research question.	Good (4)		
Adequate literature review covers generally essential aspects related to issue/ problem, objectives, theory and methods.	Moderate (3)		

Source from limited number of documents.  Sources are cited but some are in improper format.  Moderate synthesis and organization of the literature, which minimally links it to the research question.  Selected literature was from unreliable sources.  Literally supports were vague and ambiguous.		
Minimal literature review, covers minimally on essential aspects related to issue/ problem, objectives, theory and methods.  Source from single document.  Sources are cited incorrectly.  Poor synthesis and organization of the literature.  The review of literature was missing of non-research based articles, irrelevant, inaccurate or inappropriate.	Weak (2)	
Very little or fail to provide previous research background supporting issue/ problem, objectives, theory and methods.  No sources quoted.  Source is not cited.  Synthesis and organization is based on limited information. There is very poor link to the research question.	Very Weak (1)	
Literature reviews are omitted	Poor (0)	

(d) MATERIALS AND METHODS

CRITERIA	RATING	WEIGHTAGE	SCORE
Valid and appropriate methods with comprehensive justifications. Research methodology is clearly identified and coherently described in detail. The context population and sampling strategy were fully described (quantitative and qualitative). Valid and appropriate methods but with limited justifications. Research methodology is clearly identified and described with sufficient details. The context, population and sampling strategy were adequately identified and described.	Excellent (5)		
Valid and appropriate methods but with limited justifications.  Research methodology is clearly identified and described with sufficient details.  The context, population and sampling strategy were adequately identified and described.  Instruments and observation protocols were clearly identified and described relevance to the research objectives.  Procedures for implementing the study (permissions, treatments, and data gathering) were identified and described.  Descriptive and inferential methods were	Good (4)	1.0	

identified.			
Valid and appropriate methods and without			
justifications.			
Research methodology is not clearly described or			
incomplete.			
The context, population or sampling strategy was			
confusing, little relevance to the research objective,			
incomplete or not identified.			
Instruments or observation protocols description	Moderate		
was incomplete or of little relevance to the research	(3)		
objectives.			
Procedures (permissions, treatments and data			
gathering) lacked clarity.			
Descriptive or inferential methods were confusing, incomplete or lacked relevance to the			
research objectives.			
•			
Valid but inappropriate methods without justifications.			
The research methodology is not identified nor			
described.			
The context, population or sampling strategy was			
poorly described.			
Description of the instruments is incomplete or			
lacked relevance to the research objectives.	Weak		
Observation protocol was not described.	(2)		
Procedures (permissions, treatments and data	(2)		
gathering) were incomplete or lacked relevance to			
the research objectives.			
Analytical methods (descriptive, inferential test,			
and significance level) were inappropriately aligned			
with data and research			
objectives.			
Invalid and inappropriate methods and			
justifications.			
Wrong methodology.			
The context, population or sample was not			
identified or described			
Instruments and observation protocols for data	Very Weak		
collection were not identified nor described.	7.43		
Procedures for treatments and gathering data	(1)		
were omitted			
Analytical methods (descriptive, inferential test,			
and significance level) were missing/not			
implemented.			
Research design, sampling, instruments,			
procedures, data analysis based on the issues, the	Poor		
objectives and scope of the study in the thesis are	(0)		
omitted.	(3)		
OTHICOG:		1	

#### (e) RESULTS AND DISCUSSION

CRITERIA	RATING	WEIGHTAGE	SCORE
Excellent presentation, explanation and			
evaluation of results.	Excellent		
Have a very good quality and trustworthy data,	(5)		
with excellent presentation.			

Excellent discussions on findings and data interpretations.		
Good presentation, explanation and evaluation of results.  Have good quality and mostly trustworthy data, with good presentation.  Good discussions on findings and data interpretations.	Good (4)	
Sufficient quality of presentation, explanation and evaluation of results.  Insufficient and slightly doubtful data, with moderate presentation.  Sufficient discussions on findings and data interpretations.	Moderate (3)	
Moderate presentation, explanation and evaluation of results.  Insufficient and mostly doubtful data with poor presentation.  Moderate discussions on findings and data interpretations.	Weak (2)	
Poor presentation, explanation and evaluation of results.  Insufficient and non- trustworthy data, with inappropriate presentation.  Poor discussions on findings and data interpretations.	Very Weak (1)	
No explanation or evaluation of the results.  No worthy data, and bad presentation  No discussion on findings and very poor data interpretation.	Poor (0)	

#### (f) CONCLUSION

(I) CONCLUSION			
CRITERIA	RATING	WEIGHTAGE	SCORE
Conclusion addresses the research objectives			
and based on the work done.	Excellent		
Conclusions were supported by relevant results,	(5)		
and presented concisely in logical sequence.			
Conclusion addresses the research objectives			
and based on the work done.	Good		
Conclusions were supported by relevant results,	(4)		
but not presented in logical sequence.			
Conclusion addresses the research objectives			
and based on the work done.	Moderate		
Conclusions were mostly concise but with some	(3)	0.5	
vagueness in wording.			
Conclusion addresses the research objectives			
and based on the work done.	Weak		
Some conclusions are not supported by results or	(2)		
merely repeat results			
Conclusion addresses the research objectives	Very Weak		
and based on the work done.	(1)		
Conclusions merely repeat the results.	(')		
Conclusion was omitted.	Poor (0)		
	(3)		

(g) RECOMMENDATION

CRITERIA	RATING	WEIGHTAGE	SCORE
Recommendations are to the-point, well-linked to			
the conclusions, original and are extensive enough	Excellent		
to serve as project description for a new	(5)		
thesis project.			
Recommendations are to-the point, well-linked to	Good		
the conclusions and original.	(4)		
Recommendations are well-linked to the	Moderate	0.5	
conclusions	(3)	0.5	
Some recommendations are given, but the link to	Weak		
the conclusions is unclear.	(2)		
Recommendations are trivial.	Very Weak		
Recommendations are trivial.	(1)		
No Recommendations.	Poor		
NO Recommendations.	(0)		

(h) REFERENCES

CRITERIA	RATING	WEIGHTAGE	SCORE
All the sources in the reference list are cited in the text vice versa, which follows the recommended style.	Excellent (5)		
Most of the sources in the reference list are cited in the text vice versa, which follows the recommended style.	Good (4)		
Only a few sources used are cited in the reference list vice versa, which follows the recommended style.	Moderate (3)	0.5	
Many sources are missing from the reference list vice versa and did not follow recommended style.	Weak (2)		
Most of the sources are missing from the reference list vice versa and did not follow recommended style.	Very Weak (1)		
No list of references.	Poor (0)		

#### PART B (PRESENTATION EVALUATION): (10%) - CLO 3

(a) CONTENTS OF PRESENTATION

CRITERIA	RATING	WEIGHTAGE	SCORE
Major points (title, research background, problem statement, objectives, literature review, methodology, result & discussion, conclusion & recommendation) strongly supported with suitable detail.	Excellent (5)		
All major points (title, research background, problem statement, objectives, literature review, methodology, result & discussion, conclusion & recommendation) covered and explained clearly and correctly.	Good (4)	0.5	
Covers important points (title, research background, problem statement, objectives, literature review, methodology, result & discussion, conclusion & recommendation).	Moderate (3)		

A few inaccurate or irrelevant points.	
Important points (title, research background, problem statement, objectives, literature review, methodology, result & discussion, conclusion & recommendation) covered only superficially.  No major error and misconception.	Weak (2)
Loss of important points (title, research background, problem statement, objectives, literature review, methodology, result & discussion, conclusion & recommendation) and covered only superficially.  •Major error and misconception.	Very Weak (1)
•All points (title, research background, problem statement, objectives, literature review, methodology, result & discussion, conclusion & recommendation) are omitted.	Poor (0)

(b) PRESENTATION SKILL

CRITERIA	RATING	WEIGHTAGE	SCORE
Excellent organization and preparation (eye contact, clear voice, pronunciation skill, well dressed, good time management).  Confident and relaxed in the whole presentation. Engaging with audience.	Excellent (5)		
Good organization and preparation (eye contact, clear voice, pronunciation skill, well dressed, good time management).  Confident in most parts of the presentation.  Attractive to audience.	Good (4)		
Moderate organization and preparation (eye contact, clear voice, pronunciation skill, well dressed, good time management).  Confident in only some parts of the presentation.	Moderate (3)	0.5	
Basic organization and preparation (eye contact, clear voice, pronunciation skill, well dressed, good time management).  Lack of confidence in some parts of the presentation.	Weak (2)		
Unorganized and lack of preparation (eye contact, clear voice, pronunciation skill, well dressed, good time management).  Very much lacking in confidence on the whole presentation.	Very Weak (1)		
No confidence and eye contact, voice, pronunciation skill, dressed, time management are omitted.	Poor (0)		

#### (c) COMMUNICATION

CRITERIA	RATING WEIGHTAGE SCORE
Handle difficult question with ease and	Excellent
confidence.	(5)
Illustrative explanation.	(3)
Answer all questions correctly and concisely.	Good
Answers are uniformly good, and show	(4)

Moderate		
	0.5	
(3)		
Weak		
(2)		
Very Weak		
(1)		
Poor		
	(2) Very Weak (1)	(3)  Weak (2)  Very Weak (1)  Poor

#### (d) OVERALL EVALUATION

CRITERIA	RATING	WEIGHTAGE	SCORE
Able to generate new idea or ideas that have potential to be applied, have depth, quality and novel in nature in the project.	Excellent (5)		
Able to generate new ideas that are relevant and	Good		
appropriate in the project	(4)		
Able to generate new ideas with some help from	Moderate		
lecturer or colleagues in the project	(3)	0.5	
Able to generate a simple idea independently in	Weak		
the project	(2)		
Not able to generate any new idea in research	Very Weak		
project.	(1)		
No idea.	Poor (0)		

Comments and Recommendations :					
Signature	:				
Name	:		<u></u>		
Date	:				

TOTAL MARKS:		
	60	

#### **APPENDIX D2**

Rubric form of Final Report of Final Year Project (Examiner)

#### UMK/FSB/FYP-R-C1-EX (EDITION 2019)



# LAPORAN AKHIR PROJEK PENYELIDIKAN TAHUN AKHIR (PEMERIKSA) FINAL REPORT OF FINAL YEAR PROJECT (EXAMINER)

Nama Penuh (mengikut kad pengenalan/passport) Full Name (as identity card/ passport)	·
No. Matrik Pelajar : Student's Matric No	Fakulti/ Institut : Faculty/ Institute
Program ljazah: Degree Programme	_

#### PART A (FINAL REPORT): (30%) - CLO 1

#### (i) TITLE & ABSTRACT

CRITERIA	RATING	WEIGHTAGE	SCORE
Informative, concise & clearly expressed.  Detail and specific description on the issues, variables, context and methods of study.  Provide relevant and specific results and conclusions.	Excellent (5)		
Relevant, concise & clearly expressed.  Detail description of the issues, variables, context, and methods of study.  Provide relevant results and conclusions.	Good (4)		
Relevant but not concise & good expression Sketchy description of issues, variables, context and methods of study. Provide results and conclusions.	Moderate (3)	2.5	
Vague, not concise & poorly expressed. Inappropriate problem, research questions and method of the study. Provide less than enough data/evidence to back up summary of results.	Weak (2)		
Irrelevant & poorly expressed. Includes a summary of the problem, research questions and method of the study. Specific data/evidence to back up summary of results is not provided	Very Weak (1)		
Omitted.	Poor (0)		

#### (j) CHAPTER 1 (INTRODUCTION)

CRITERIA	RATING	WEIGHTAGE	SCORE

Excellent coverage of research background. Problem statements, objectives and variables are specific and clearly and precisely defined. Scope of study satisfy the objectives and is clearly explained. Significance of the study is relevant, explicit and clearly described. All elements are supported by literature.	Excellent (5)		
Good coverage of research background Problem statements, objectives, and variables are specific and adequately defined. Scope of study partially fulfil the objectives and adequately explained. Significance of the study is clearly stated and focused. Connections are established with the literature.	Good (4)		
Moderate coverage of research background. Problem statements, objectives are identified but not clearly defined. Scope of study is too broad or not specific and poorly explained. Significance of the study is not logically relevant to the problem. Connections to the literature are unclear or debatable.	Moderate (3)	2.5	
Poor coverage of research background. Problem statements and objectives are identified but not defined. Scope of study does not fulfil the objectives. Significance of the study is not clear, nor focused nor explicit.	Weak (2)		
Inadequate coverage of research background. Problem statements and objectives are not identified. Scope of study and significance of the study are not clearly stated and irrelevant.	Very Weak (1)		
Research background, problem statement, scope of the study, and objectives are omitted.	Poor (0)		

### (k) CHAPTER 2 (LITERATURE REVIEW)

CRITERIA	RATING	WEIGHTAGE	SCORE
Excellent literature review covers essential aspects related to issue/ problem, objectives, theory and methods.  Source from multiple, research based			
documents.  Detail conclusions based on evidence cited.  Sources are properly cited & in standardized /APA format	Excellent (5)	2.5	
Narrative integrates critical and logical details from literatures.  Excellent synthesis and organization of literature that is clearly linked to research question.			

Good literature review covers essential aspects related to issue/ problem, objectives, theory and methods.  Source from multiple documents.  Conclusions based on evidence cited.  Sources are properly cited.  Good synthesis and organization of the literature, which is clearly linked to the research question.	Good (4)
Adequate literature review covers generally essential aspects related to issue/ problem, objectives, theory and methods.  Source from limited number of documents.  Some conclusions based on evidence cited.  Sources are cited but some are in improper format.  Moderate synthesis and organization of the literature, which minimally links it to the research question.  Selected literature was from unreliable sources.  Literally supports were vague and ambiguous.	Moderate (3)
Minimal literature review, covers minimally on essential aspects related to issue/ problem, objectives, theory and methods.  Source from single document. Only one conclusion based on evidence cited. Sources are cited incorrectly. Poor synthesis and organization of the literature. The review of literature was missing of non-research based articles, irrelevant, inaccurate or inappropriate.	Weak (2)
Very little or fail to provide previous research background supporting issue/ problem, objectives, theory and methods.  No sources quoted.  Source is not cited.  Synthesis and organization is based on limited information. There is very poor link to the research question.	Very Weak (1)
Literature reviews are omitted	Poor (0)

(I) CHAPTER 3 (MATERIALS AND METHODS)

CRITERIA	RATING	WEIGHTAGE	SCORE
Valid and appropriate methods with comprehensive justifications. Research methodology is clearly identified and coherently described in detail. The context population and sampling strategy were fully described (quantitative and qualitative). Instruments and observation protocols were clearly described in detail relevance to the research objectives. Procedures for implementing the study (permissions, treatments, and data gathering) were	Excellent (5)	2.5	

	1	
fully identified and described.		
Analytical methods (descriptive, inferential test,		
and significance level) were sufficiently specific,		
clear and appropriate.		
Valid and appropriate methods but with limited		
justifications.		
Research methodology is clearly identified and		
described with sufficient details.		
The context, population and sampling strategy		
were adequately identified and described.		
Instruments and observation protocols were	Good	
clearly identified and described relevance to the	(4)	
research objectives.		
Procedures for implementing the study		
(permissions, treatments, and data gathering) were		
identified and described.		
Descriptive and inferential methods were		
identified. Level of significance was stated		
Valid and appropriate methods and without		
justifications.		
Research methodology is not clearly described or		
incomplete.		
The context, population or sampling strategy was		
confusing, little relevance to the research objective,		
incomplete or not identified.		
Instruments or observation protocols description	Moderate	
was incomplete or of little relevance to the research	(3)	
objectives.		
Procedures (permissions, treatments and data		
gathering) lacked clarity.		
Descriptive or inferential methods were		
confusing, incomplete or lacked relevance to the		
research objectives.		
Valid but inappropriate methods without		
justifications.		
The research methodology is not identified nor		
described.		
The context, population or sampling strategy was		
poorly described.		
Description of the instruments is incomplete or		
lacked relevance to the research objectives.	Weak	
Observation protocol was not described.	(2)	
Procedures (permissions, treatments and data		
gathering) were incomplete or lacked relevance to		
the research objectives.		
Analytical methods (descriptive, inferential test, and significance level) were inapprepriately aligned		
and significance level) were inappropriately aligned		
with data and research objectives.		
Invalid and inappropriate methods and		
justifications.		
Wrong methodology.		
The context, population or sample was not	Very Weak	
identified or described	(1)	
Instruments and observation protocols for data		
		I
collection were not identified nor described.  Procedures for treatments and gathering data		

were omitted Analytical methods (descriptive, inferential test, and significance level) were missing/not implemented.			
Research design, sampling, instruments, rocedures, data analysis based on the issues, the bjectives and scope of the study in the thesis are mitted.	Poor (0)		

(m) CHAPTER 4 (POSTER)

CRITERIA	RATING	WEIGHTAGE	SCORE
Produce excellent geological map of the study area with proper scale and complete symbols/legends for all components in the map.	Excellent (5)		
Produce good geological map of the study area with proper scale and correct symbols/legends for most of the components in the map.	Good (4)		
Produce moderate geological map of the study area with proper scale but missing some symbols/legends	Moderate (3)	5.0	
Produce poor geological map of the study area with wrong scale and incomplete symbols/legends.	Weak (2)		
Produce poor geological map of the study area with wrong scale and incomplete symbols/legends.	Very Weak (1)		
Unable to produce geological map of the study area.	Poor (0)		

(n) CHAPTER 4 (MAPPING)

CRITERIA	RATING	WEIGHTAGE	SCORE
All part of geology in the study area (general geology, structural geology and petrography, etc) is well explained.  Able to produce excellent geological map of the study area.  Able to provide correct symbols and for interpretation of structural features, contacts, cross section/s, legend, coordinates, etc.	Excellent (5)		
Most part of geology in the study area tasks (general geology, structural geology and petrography, etc.) is well explained.  Able to produce very good geological map of the study area.  Able to provide correct symbols and markings for interpretation of structural features, contacts, cross section/s, legend, coordinates, etc.	Good (4)	5.0	
Some parts of geology in the study area (general geology, structural geology and petrography, etc.) are well explained.  Able to produce good geological map of the study area.  Able to provide several symbols and markings are used for interpretation of structural features, contacts, cross section/s, legend, coordinates, etc.	Moderate (3)		
Many part of geology in the study area (general geology, structural geology and petrography, etc.)	Weak (2)		

are not well explained.		
Able to produce poor geological map of the study		
area.		
Only able to provide very few symbols and		
markings for interpretation of structural features,		
contacts, cross section/s, legend, coordinates, etc.		
Fail to provide the explanation of the geology in		
the study area (general geology, structural geology		
and petrography, etc)		
Able to produce very poor geological map of the	Very Weak	
study area.	(1)	
No symbols and markings for interpretation of		
structural features, contacts, cross section/s,		
legend, coordinates, etc.		
No explanation of the geology in the study area		
(general geology, structural geology and		
petrography, etc)		
Unable to produce geological map of the study	Poor	
area.	(0)	
No symbols and markings for interpretation of		
structural features, contacts, cross section/s,		
legend, coordinates, etc.		

(o) CHAPTER 4 (SPECIFICATION)

CRITERIA	RATING	WEIGHTAGE	SCORE
Excellent presentation, explanation and evaluation of results.  Have a very good quality and trustworthy data, with excellent presentation.  Excellent discussions on findings and data interpretations.	Excellent (5)		
Good presentation, explanation and evaluation of results.  Have good quality and mostly trustworthy data, with good presentation.  Good discussions on findings and data interpretations.	Good (4)		
Sufficient quality of presentation, explanation and evaluation of results.  Insufficient and slightly doubtful data, with moderate presentation.  Sufficient discussions on findings and data interpretations.	Moderate (3)	5.0	
Moderate presentation, explanation and evaluation of results.  Insufficient and mostly doubtful data with poor presentation.  Moderate discussions on findings and data interpretations.	Weak (2)		
Poor presentation, explanation and evaluation of results. Insufficient and non-trustworthy data, with inappropriate presentation. Poor discussions on findings and data interpretations.	Very Weak (1)		

No explanation or evaluation of the results.  No worthy data, and bad presentation	Poor	
No discussion on findings and very poor data interpretation.	(0)	

(p) CONCLUSION

(P) CONCLUSION	DATINO	WEIGHTAGE	22255
CRITERIA	RATING	WEIGHTAGE	SCORE
Conclusion addresses the research objectives			
and based on the work done.	Excellent		
Conclusions were supported by relevant results,	(5)		
and presented concisely in logical sequence.			
Conclusion addresses the research objectives			
and based on the work done.	Good		
Conclusions were supported by relevant results,	(4)		
but not presented in logical sequence.			
Conclusion addresses the research objectives			
and based on the work done.	Moderate		
Conclusions were mostly concise but with some	(3)	2.5	
vagueness in wording.			
Conclusion addresses the research objectives			
and based on the work done.	Weak		
Some conclusions are not supported by results or	(2)		
merely repeat results	. ,		
Conclusion addresses the research objectives	Mami Maali		
and based on the work done.	Very Weak		
Conclusions merely repeat the results.	(1)		
Conclusion was omitted.	Poor (0)		
	(0)		

(q) RECOMMENDATION

CRITERIA	RATING	WEIGHTAGE	SCORE
Recommendations are to the-point, well-linked to			
the conclusions, original and are extensive enough	Excellent		
to serve as project description for a new thesis	(5)		
project.			
Recommendations are to-the point, well-linked to	Good		
the conclusions and original.	(4)		
Recommendations are well-linked to the	Moderate	2.5	
conclusions	(3)	2.5	
Some recommendations are given, but the link to	Weak		
the conclusions is not always clear.	(2)		
Recommendations are trivial.	Very Weak		
Recommendations are trivial.	(1)		
No Decemmendations	Poor		
No Recommendations.	(0)		

#### (r) REFERENCES

· -			
CRITERIA	RATING	WEIGHTAGE	SCORE
All the sources in the reference list are cited in the text vice versa, which follows the recommended style.	Excellent (5)	2.5	
Most of the sources in the reference list are cited	Good		

in the text vice versa, which follows the	(4)
recommended style.	
Only a few sources used are cited in the	Moderate
reference list vice versa, which follows the	(3)
recommended style.	(0)
Many sources are missing from the reference list	Weak
vice versa and did not follow recommended style	(2)
Most of the sources are missing from the	Very Weak
reference list vice versa and did not follow	•
recommended style.	(1)
No list of references	Poor
110 1131 01 16161611063	(0)

#### PART B (PRESENTATION EVALUATION): (10%) - CLO 3

#### (e) CONTENTS OF PRESENTATION

CRITERIA	RATING	WEIGHTAGE	SCORE
Major points (title, research background, problem statement, objectives, literature review, methodology, result & discussion, conclusion & recommendation) strongly supported with suitable detail.	Excellent (5)		
All major points (title, research background, problem statement, objectives, literature review, methodology, result & discussion, conclusion & recommendation) covered and explained clearly and correctly	Good (4)		
Covers important points (title, research background, problem statement, objectives, literature review, methodology, result & discussion, conclusion & recommendation).  A few inaccurate or irrelevant points.	Moderate (3)		
Important points (title, research background, problem statement, objectives, literature review, methodology, result & discussion, conclusion & recommendation) covered only superficially.  No major error and misconception.	Weak (2)		
Loss of important points (title, research background, problem statement, objectives, literature review, methodology, result & discussion, conclusion & recommendation) and covered only superficially.  Major error and misconception.	Very Weak (1)		
All points (title, research background, problem statement, objectives, literature review, methodology, result & discussion, conclusion & recommendation) are omitted.	Poor (0)		

#### (f) PRESENTATION SKILL

CRITERIA	RATING	WEIGHTAGE	SCORE
Excellent organization and preparation (eye contact, clear voice, pronunciation skill, well dressed, good time management).  Confident and relaxed in the whole presentation. Engaging with audience.	Excellent (5)		

Good organization and preparation (eye contact, clear voice, pronunciation skill, well dressed, good time management).  Confident in most parts of the presentation.  Attractive to audience	Good (4)
Moderate organization and preparation (eye contact, clear voice, pronunciation skill, well dressed, good time management).  Confident in only some parts of the presentation	Moderate (3)
Basic organization and preparation (eye contact, clear voice, pronunciation skill, well dressed, good time management).  Lack of confidence in some parts of the presentation.	Weak (2)
Unorganized and lack of preparation (eye contact, clear voice, pronunciation skill, well dressed, good time management).  Very much lacking in confidence on the whole presentation	Very Weak (1)
No confidence and eye contact, voice, pronunciation skill, dressed, time management are omitted.	Poor (0)

(g) COMMUNICATION

CRITERIA	RATING	WEIGHTAGE	SCORE
Handle difficult question with ease and confidence.  Illustrative explanation	Excellent (5)		
Answer all questions correctly and concisely.  Answers are uniformly good, and show knowledge beyond presentation.	Good (4)		
Answer most questions correctly.  Answers are uniformly good, both in substance and delivery.	Moderate (3)		
Answer half of question correctly. Sometimes need clarification. Answers are inconsistent, both in substance or delivery.	Weak (2)		
Answer at least one question correctly.  Need clarification.  Answers are low in quality, either in substance or delivery	Very Weak (1)		
Unable to answer all the questions.	Poor (0)		

#### (h) OVERALL EVALUATION

CRITERIA	RATING	WEIGHTAGE	SCORE
Able to generate new idea or ideas that have potential to be applied, have depth, quality and novel in nature in the project.	Excellent (5)		
Able to generate new ideas that are relevant and appropriate in the project	Good (4)		

Able to generate new ideas with some help from	Moderate
lecturer or colleagues in the project	(3)
Able to generate a simple idea independently in	Weak
the project.	(2)
Not able to generate any new idea in research	Very Weak
project.	(1)
No idea	Poor
No idea.	(0)

Comments a	nd Recomm	endations :	
Signature	:		-
Name	:		=
Date	:		_

TOTAL MARKS: \_\_\_\_\_

#### **APPENDIX E**

#### Form of Titles of Final Year Project

#### **UMK/FSB/FYP-F1 EDITION 2017)**



## TAJUK PROJEK PENYELIDIKAN TAHUN AKHIR TITLES OF FINAL YEAR PROJECT

Kod/Nama Kursus:	Sesi/Session:		
Code/ Course Name	Semester/ Semester:		
Nama Program :	Fakulti/ Institut :		
Name of Programme	Faculty/ Institute		
Penyelaras Projek Tahun Akhir: Coordinator of Final Year Project			

No.	Supervisor	Title of Research	Student	Matrix No.
1.				
2.				

#### **APPENDIX F**

#### Final Year Project Changes Application Form

#### UMK/FSB/FYP-F2 (EDITION 2017)



#### BORANG PERMOHONAN/ PERTAMBAHAN/ PERTUKARAN PROJEK PENYELIDIKAN TAHUN AKHIR FINAL YEAR PROJECT CHANGES APPLICATION FORM

1.	Nama Penuh (mengikut kad pengenalan/passport): Full Name (as identity card/ passport)		· · · · · · · · · · · · · · · · · · ·
2.	No. Matrik Pelajar :Student's Matric No.	3.	No.Telefon Pelajar : Student's Telephone No.
4.	Fakulti/ Institut:Faculty/ Institute		
5.	Program Ijazah:	-	
6.	*Permohonan/ Pertambahan/ Pertukaran Apply/ Add/ Change		
	Penyelia Utama/ Main Supervisor Daripada program/ From Programme		
	Penyelia Utama/Main Supervisor Tukar kepada/Change to		
	Penyelia Bersama/Co-Supervisor Tambah/ Tukar kepada/Add/ Change t	o_	
	Tajuk Penyelidikan/Research Title Tukar kepada/Add/ Change to		
	Lain-lain Others		
7.	Sebab *permohonan/ pertambahan/ pertukaran pen Reasons for applying/ adding/ changing supervisor		
	Tandatangan Pelajar:Student's Signature	7	Гarikh / <i>Date:</i>

8. Perakuan *Penyelia / Penyelia Bersama	
Declaration of* Supervisor / Co-supervisor	
Bersetuju dengan permohonan calon	
Agree with candidate's application	
Tidak Bersetuju dengan permohonan d	calon kerana
Not agree with candidate's application	
Name Deputation	
Nama Penyelia:	<del></del>
Ivanie di daporvidoi	
Tandatangan/ Cop Rasmi:	
Signature/ Stamp	Date
9. Perakuan Ketua Program	
Declaration of Head of Programme	
Bersetuju dengan perakuan Penyelia	
Agree with the declaration of Supervisor	or
Tidak Bersetuju dengan perakuan Pen	velia kerana
Not agree with the declaration of Super	
Tandatangan/ Cop Rasmi:	
Signature/ Stamp	Date
10.Perakuan Penyelaras Projek Tahun Akhir	
Declaration of Coordinator of Final Year Project	
Permohonan diluluskan	
Application is approved	
Permohonan tidak diluluskan kerana	
Application is not approved because	
Tandatangan/ Cop Rasmi:	Tarikh:
Signature/ Stamp	Date

Nota:

Note:

Jika calon didapati memalsukan keterangan di atas, permohonannya akan dibatalkan dan akan dikenakan tindakan tegas.
\*Delete inappropiate field and Mark X in appropriate box
If the candidates found to be providing false information above, the application will be expired and the candidates will be panalized

<sup>\*</sup>Potong yang tidak berkenaan dan Tandakan X pada ruang berkenaan

#### **APPENDIX J**

Form of Final Year Project 1 (Coordinator)

#### UMK/FSB/FYP-R-B1-COOR (EDITION 2018)



# PROJEK PENYELIDIKAN TAHUN AKHIR 1 (KOORDINATOR) FINAL YEAR PROJECT 1 (COORDINATOR)

1.	Nama Penuh (mengikut kad pengenalan/passport):
	ruii Name (as identity card/ passport)
2.	No. Matrik Pelajar:
	Student's Matric No.
3.	Fakulti/ Institut:
	Faculty/ Institute
4.	Program ljazah:
	Degree Programme

# **COORDINATOR (10%)** - CLO 4

#### (s) TITLE & ABSTRACT

CRITERIA	RATING	WEIGHTAGE	SCORE
Complete tasks ahead of schedule by creating	Excellent		
plans and timetables for completing the work.	(5)		
Provide work within the given period using time	Good		
management skills.	(4)		
Sometimes can finish work within a given period.	Moderate		
Trying to manage time	(3)	10.0	
Rarely finish work in the given period.	Weak	10.0	
Cannot manage time well.	(2)		
No effort to complete the work within the period.	Very Weak		
Cannot manage time	(1)		
Time management omitted.	Poor (0)		

#### **APPENDIX H**

Submission form of Proposal / Report of Final Year Project for Evaluation / Re-Evaluation

# **UMK/FSB/FYP-F3 EDITION 2017)**



PENYERAHAN CADANGAN / BAB 1, 2 &3 / LAPORAN AKHIR
PROJEK PENYELIDIKAN TAHUN AKHIR UNTUK
PEMERIKSAAN/PEMERIKSAAN SEMULA
SUBMISSION OF PROPOSAL / CHAPTER 1, 2 & 3 /
FINAL REPORT OF FINAL YEAR PROJECT FOR
EVALUATION / RE-EVALUATION

1.	Nama Penuh (mengikut kad pengenalan/passport): Full Name (as identity card/ passport)	
2.	No. Matrik Pelajar: Student's Matric No.	
3.	Fakulti/ Institut: Faculty/ Institute	
4.	Program Ijazah:	
5.	Saya dengan ini mengesahkan bahawa kelulusan yang dinyatakan adalah untuk penyeraha Sila tandakan $$ ): hereby certify that the approval for submission (Please tick $$ ):	an
	a) Cadangan Projek Penyelidikan Tahun Akhir Proposal of Final Year Project	
	b) Bab 1,2 & 3 @ Bab 1, 2, 3 & 4 sahaja Chapter 1, 2 & 3 / Chapter 1, 2, 3 & 4 only	
	c) Laporan Akhir Projek Penyelidikan Tahun Akhir Bab 1, 2, 3, 4 & 5 / Bab 1, 2, 3, 4, 5 & 6 Final report of Final Year Project of Chapter 1, 2 3, 4 & 5 / Chapter 1, 2, 3, 4, 5 & 6	
6.	Perakuan Penyelia Declaration of Supervisor	_
	Saya telah menyemak/tidak menyemak *cadangan / Bab 1, 2 & 3 @ Bab 1, 2, 3 & 4 sahaja aporan akhir bagi projek penyelidikan tahun akhir calon ini dan mengesahkan bahawa ia boleh diserahkan untuk pemeriksaan.  have reviewed / not reviewed the *proposal / chapter 1, 2 & 3 @ Chapter 1, 2, 3 & 4 only / final report of final year project for this candidate and confirm that it can be submitted for evaluation.	
	a) Format /Format	

	b)	Kandungan te	esis / Thesis Contents		
	c)	Laporan Turn	nitin / Turnitin Report (<20%)`	Ya / Yes	
PLEASE NOTI	E:				
		prove the Propo gramme of final	oosal / Chapter 1, 2 & 3 / Final l year project.	year project report befor	e submit to
Nama Per Name of S		visor			
Tandatang Signature/				Tarikh _ <i>Date:</i>	<del></del>
7. Perakua Declara		meriksa f <i>Examiner</i>			
	」 akl <i>Ag</i>	nir bagi projek p <i>ree with *propo</i>	n *cadangan / Bab 1, 2 & 3 @penyelidikan tahun akhir calor psal / chapter 1, 2 & 3 @ Cha for this candidate.	n ini.	
	│ lap <i>N</i> o	oran akhir bagi t agree with *p	dengan *cadangan / Bab 1, 2 i projek penyelidikan tahun ak proposal / chapter 1, 2 & 3 ( r project for this candidate bed	thir calon ini kerana  Chapter 1, 2, 3 & 4	
Nama Per Name of E					
Tandatang Signature/				Tarikh _ <i>Date:</i>	
		nyelaras Projek f Coordinator Fi	k Tahun Akhir Final Year Project		
Tandatang Signature/				Tarikh _ <i>Date:</i>	

#### **APPENDIX I**

# Checklist of Submission of Final Year Project

# UMK/FSB/FYP-F4 EDITION 2023)



# SENARAI SEMAK PENGHANTARAN PROJEK PENYELIDIKAN TAHUN AKHIR CHECKLIST OF SUBMISSION OF FINAL YEAR PROJECT

1.	Nama Penuh (mengikut kad pengenalan/passport):
2.	No. Matrik Pelajar:
3.	Fakulti/ Institut:Faculty/ Institute
4.	Program Ijazah:
5.	Perakuan Penyelia  Declaration of Supervisor  Saya telah menyemak pembetulan laporan akhir bagi projek penyelidikan tahun akhir calon ini dan mengesahkan bahawa ia boleh diserahkan untuk salinan kulit keras.  I have reviewed final report correction of final year project for this candidate and confirm that it can be submitted for hardbound.  Jika tidak, sila nyatakan:  If not, please state:
N T	nma Penyelia nme of Supervisor: ndatangan/ Cop Rasmi Tarikh gnature/ Stamp: Date:

penyerahan (	Sila tandakan √):		
I hereby certin	fy that the above mentioned approv	al for submission (Plea	se tick √):
		Students	Penyelaras FYP
	linan kulit keras ( <i>hardbound)</i> tor/ Coordinator		
- Dimuat na	linan lembut ( <i>soft copy</i> ) nik ke platform yang ditetapkan the provided platform		
	(jika berkenaan) study area (If any)		
PLEASE NOTE: The student sh to Coordinator.	ould ensure ONE copy of a hardbou	und final year project rep	port must be submitted

#### **APPENDIX J**

Form of Final Year Project (FYP) Complain

WP.	UMK/FSB/FYP-F5 (EDITION 2024)	Tarikh Kuatkuasa :
UNIVERSITI MALAYSIA KELANTAN	BORANG ADUAN	S BUMI AHUN AKHIR (PTA) COMPLAINT FORM

(SILA TANDAKAN	1	DI RUANG YANG DISEDIAKAN)
(PLEASE TICK	,	THE SPACE PROVIDED)

PROJEK TAHUN AKHIR (PTA I) FINAL YEAR PROJECT I (FYP I)

PROJEK TAHUN AKHIR II (PTA II) FINAL YEAR PROJECT II (FYP II)

	MAKLUMAT PEI	NGADU/COMPLAINAN	TINFORMATION	
1	NAMA/NAME			
2	JABATAN/ DEPARTMENT			
3	PROGRAM/ PROGRAME			
4	PERANAN/ROLE	PENYELIA UTAMA MAIN SUPERVISOR	PENYELIA BERSAMA CO-SUPERVISOR	LAIN-LAIN (SILA NYATAKAN) OTHERS (PLEASE SPECIFY)
5	EMEL/EMAIL			

7	5
UNIV	ERSITI
MAI	AYSIA

Tarikh Kuatkuasa:

# FAKULTI SAINS BUMI BORANG ADUAN PROJEK TAHUN AKHIR (PTA) FINAL YEAR PROJECT (FYP) COMPLAINT FORM

	MAKLUMAT PELAJAR/STUDENT'S INFORMATION				
1	NAMA/ <i>NAME</i>				
2	NO MATRIK/				
	MATRIC NO.				
3	TAJUK PROJEK/				
	PROJECT TITLE				

# Tiada penglibatan/Kehadiran tidak teratur (Non-participation/Irregular attendance) Tingkah laku tidak profesional atau salah laku (Unprofessional behavior or misconduct) Gagal menepati tarikh akhir atau hasil kerja (Failure to meet deadlines or deliverables) Komunikasi / Kerjasama yang lemah (Poor communication/collaboration) Pelanggaran integriti akademik atau plagiat (Breach of academic integrity or plagiarism) Lain-lain (sila nyatakan: Other (please specify): Huraian Terperinci Masalah (Berikan penjelasan yang jelas dan ringkas mengenai isu tersebut, termasuk tarikh, insiden dan sebarang dokumentasi yang berkaitan) Detailed Description of the Problem (Provide a clear and concise explanation of the issue, including dates, incidents and any relevant documentation)

75
UNIVERSIT
MALAYSIA

UMK/FSB/FYP-F5 (EDITION 2024)	Tarikh Kuatkuasa :

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МΔ	LAY	SIA

Tarikh Kuatkuasa :

TINDAKAN YANG TELAH DIAMBIL/ACTION(S) TAKEN
<ul> <li>Sudahkan anda berbincang tentang isu terlibat dengan pelajar?</li> <li>Have you discussed the issue with the student?</li> </ul>
□ Ya/Yes
□ Tidak/ <i>No</i>
Jika ya, apakah penyelesaian?  If yes, what was the outcome?
☐ Isu selesai/Issue resolved
☐ Hampir selesai, tetapi isu masih berterusan/Partial resolution, but ongoing issues
□ Tiada penyelesaian/ <i>No resolution</i>
Nyatakan butiran terperinci mengenai tindakan yang diambil/Provide details of any actions taken:  Nyatakan butiran terperinci mengenai tindakan yang diambil/Provide details of any actions taken:

W	
7	5
UNIV	ERSITI
MAI	AYSIA

Tarikh Kuatkuasa :

	Apakah hasil atau penyelesaian yang anda harapkan melalui aduan ini?
	(What outcome or resolution are you seeking through this complaint?)
	☐ Amaran rasmi kepada pelajar/Formal warning to the student
	☐ Mediasi atau pertemuan dengan fakulti/Mediation or meeting with faculty
	☐ Semakan atau pelarasan gred/ <i>Grade review or adjustment</i>
	□ Lain-lain (sila nyatakan)  Other (please specify):
)C	OKUMEN SOKONGAN/SUPPORTING DOCUMENT(S)
C	OKUMEN SOKONGAN/SUPPORTING DOCUMENT(S)
	OKUMEN SOKONGAN/SUPPORTING DOCUMENT(S)  Inpirkan sebarang dokumen berkaitan bagi menyokong aduan, sekiranya ada.
.an	
Lan	npirkan sebarang dokumen berkaitan bagi menyokong aduan, sekiranya ada.

w		4	
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МΔ	LA	YSI	A

UMK/FSB/FYP-F5 (	(EDITION 2024)	١
------------------	----------------	---

Tarikh Kuatkuasa :

PERAKUAN PENGADU/ COMPLAINANT'S CONFIRMATION								
	mua maklumat yang dinyatakan adalah tepat dan benar.  n provided is accurate and true.							
Tarikh/ <i>Date</i>	Tandatangan & Cop Signature & stamp							

TINDAKAN OLEH FAK	(ULTI/ ACTION BY FACU	JLTY	
Tindakan yang diambil/Ca	tatan		
Actions Taken/Remarks:			
Tarikh/ <i>Date:</i>	Nama/Name:	Jawatan/Position:	Tandatangan & cop/
			Signature& stamp:

#### **APPENDIX K**

Sample of numbering a chapter and sub-heading in a chapter

#### **CHAPTER 2**

#### TITLE OF THE CHAPTER

# 2.1 Sub-Heading

Text should begin at this position and continue to the end of the left margin. Text must be typed using double (2.0) spacing

# 2.1.1 Sub – Sub Heading

Text should begin at this position and continue to the end of the left margin. Text must be typed using double (2.0) spacing

# **APPENDIX L**

# Sample of a table in the text

 Table 1.1: Raw data for bottom portion analysis

Portion	Ana	lysis	Rep 1	Rep 2	Rep 3	Average
		Moisture content (%)	6.23	6.12	7.86	6.74
	Proximate Analysis	Volatile matter (%)	85.92	85.76	86.63	86.10
		Ash content (%)	0.26	0.29	0.32	0.29
		Bulk density (g/cm <sup>3</sup> )	51.70	54.92	52.82	53.15
Bottom	Dhygiaal	Specific gravity (g/cm <sup>3</sup> )	0.98	0.98	0.85	0.94
	Physical Analysis	Durability (%)	33.66	33.50	13.37	26.84
		Length (mm)	11.06	12.37	11.06	11.50
		Diameter (mm)	5.74	5.80	5.87	5.80
	Energy Content Analysis	Calorific value (MJ/Kg)	22.13	21.59	21. 84	21.86

(Source: Tim, 2015)

# APPENDIX M

# Sample of an illustration or a figure

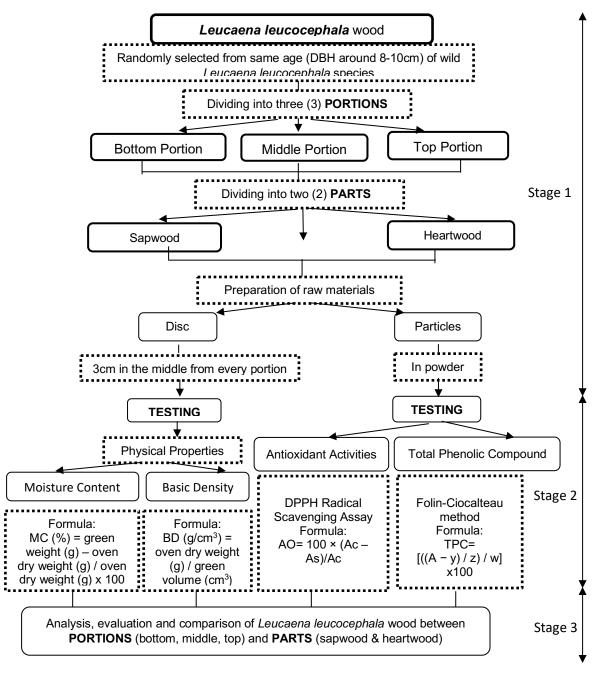


Figure 3.1: Wood pellet were produced from pelletizer.

#### APPENDIX N

#### Sample of research flow

#### **RESEARCH FLOW**



Stage 1: Material preparation (grouping specimen based on PORTIONS and PARTS)

Stage 2: Testing of the Leucaena leucocephala based on physical properties, AO and TPC

Stage 3: Analysis, evaluation and comparison of the obtained experimental data

# **APPENDIX O**

# Sample of Gantt Chart

GANTT CHART (by arrow)	GANTT CHART (by arrow) 2016									2017			
Year			,					1		1	1	1	
Project Activities	J	F	M	Α	M	J	J	0	S	0	N	D	J
Selection of Project Title  A) Discussion with supervisor B) Collect information			<b>→</b>										
A) Collect information from journal, books and past thesis.			<b>&gt;</b>										
Writing Research Proposal  A) Literature review  B) Discuss with supervisor  C) Gathering data information  D) Submission proposal				<b>~</b>									
Research Proposal Presentation  A) Presentation to supervisor and examiner													
Final Draft Proposal Submission (Chapter 1,2,3)				<b>^</b>									
Conducting research work  A) Get the sample in FRIM  B) Sample preparation for lab  C) Lab – Moisture content, basic density, antioxidant and total phenolic compound					·					<b>→</b>			
Data analysis											<b>^</b>		
Final report writing  A) Discuss with supervisor  B) Analysis the data gathering  C) Compare data obtained  with previous study												<b>→</b>	
Final Presentation													$\longrightarrow$
Final report submission													$\longrightarrow$

Year	2016							2017					
Project Activities			М	Α	М	J	J	0	s	0	N	D	J
Selection of Project Title  A) Discussion with supervisor B) Collect information													
A) Collect information from journal, books and past thesis.													
Writing Research Proposal  A) Literature review  B) Discuss with supervisor  C) Gathering data information  D) Submission proposal													
Research Proposal Presentation  A) Presentation to supervisor and examiner													
Final Draft Proposal Submission (Chapter 1,2,3)													
Conducting research work  A) Get the sample in FRIM  B) Sample preparation for lab  C) Lab – Moisture content, basic density, antioxidant and total phenolic compound													
Data analysis													
Final report writing  A) Discuss with supervisor  B) Analysis the data gathering  C) Compare data obtained with previous study													
Final Presentation													
Final report submission													

# **APPENDIX P**

# Sample of Milestone

Project Activities	Date
Completion of Final Draft Proposal	May 2014
Completion of Sample Preparation	June 2014
Completion of Experiment	October 2014
Completion of Report and Documentation	December 2014

#### **APPENDIX Q**

Sample of a thesis front cover

FULL TITLE (Times New Roman 18pt)

FULL NAME (Times New Roman 16pt)

FACULTY OF EARTH SCIENCE (Times New Roman 16pt)
UNIVERSITI MALAYSIA KELANTAN (Times New Roman 16pt)

Year (Times New Roman 14pt)

#### **APPENDIX R**

Sample of a thesis spine

(Border included only for illustration purposes)

B. App. Sc. (NAME OF PROGRAM) with Hons.

FONT – Norma centralized GOLD and TIMES NEW ROMAN. (Font size adjusted according to thickness of spine for clarity)

#### **APPENDIX S**

Sample of a title page



# FULL TITLE (Times New Roman 18pt)

by (Times New Roman 14pt)

FULL NAME (Times New Roman 16pt)

A report submitted in fulfillment of the requirements for the degree of Bachelor of Applied Science (Name of Program) with Honours (Times New Roman 14pt)

# FACULTY OF EARTH SCIENCE UNIVERSITI MALAYSIA KELANTAN

(Times New Roman 16pt)

Year (Times New Roman 14pt)

# **APPENDIX T**

# Sample of a declaration page

# **DECLARATION**

I declare that this thesis entitled "title of the thesis" is the result of my own research exce	ept
as cited in the references. The thesis has not been accepted for any degree and is r	101
concurrently submitted in candidature of any other degree.	

Signature	·
Name	÷
Date	:

# **APPENDIX U**

# Example of acknowledgement page

# ACKNOWLEDGEMENT

	It is	a grea	t pleasure to	address	people wh	o helped	me throughou	at this	project to
enhanc	e	my	knowledge	and	practical	skills	especially	in	research
area									
	My	gratituo	de also been e	xtended	to				
	Му	fellow	undergraduat	te stude	ents should	also be	recognised for	or their	r support
Finally									

#### **APPENDIX V**

#### Example of an abstract in English

# Characteristics of *Leucaena leucocephala* Species as Wood Pellets for Biomass Energy Sources

#### **ABSTRACT**

In the current past few decades, the dependence of the people towards the nonrenewable energy such as fossil fuel and natural gas are rapidly rises in the urbanization of industrial, agriculture, domestic and pharmaceutical activities. Biomass energy is a green alternative energy to be arising up recently due to its attribute as environment friendly and promote sustainable development. Leucaena leucocephala is commonly known as 'Petai Belalang' in Malaysia. In this study, the stem portions of Leucaena leucocephala had been divided into three (3) portions which are bottom, middle and top; two (2) particle sizes in wood pellets manufacturing which are 0.5 and 1.5 mm. The six (6) pellets samples produced were determined by their proximate parameters (moisture content, volatile matter, ash content and fixed carbon), physical characteristics (specific gravity, bulk density, durability, length and diameter) and energy content. The results of proximate analysis of stem portions showed a significant outcome in ash content within the six (6) pellets samples whereas all of the parameters are remarkable different in the particle sizes within the pellets samples. For physical characteristics analysis, both of the factors were showed obviously different in specific gravity, bulk density and length. The highest calorific value is performed by pellets samples from middle portion of 0.5 mm with 20.58 MJ/Kg. Both of the calorific value in portions and particle sizes were proved significantly different. There were 35 pairs of variables in correlation showed either positively or negatively linear relationship to each other. Based on the overall results, the portions and particle sizes in wood pellets had caused the effects to the proximate and physical characteristics as well as calorific value, respectively.

#### **APPENDIX W**

Example of an abstract in Bahasa Melayu

# Ciri-ciri Pelet Kayu daripada Spesies *Leucaena leucocephala* sebagai Sumber Tenaga Biojisim

# **ABSTRAK**

Dalam beberapa dekad yang lalu, kebergantungan manusia terhadap penggunaan sumber tenaga yang tidak boleh diperbaharui seperti bahan api fosil dan gas gali telah menunjukkan peningkatan mendadak dalam sektor pembangunan, perindustrian, pertanian, domestik dan juga aktiviti farmaseutikal. Tenaga biojisim merupakan salah satu pilihan alternatif untuk menangani masalah kekurangan dalam sumber tenaga asli. Ciri- ciri tenaga biojisim yang mesra alam dan menggalakkan pembangunan kelestarian menjadi pilihan dalam kalangan masyarakat. Leucaena leucocephala juga dikenali sebagai 'Petai Belalang' dalam kalangan rakyat Malaysia. Dalam kajian ini, batang pokok Leucaena leucocephala dibahagikan kepada tiga (3) bahagian iaitu pangkal, tengah dan atas; selain dua (2) saiz partikel yang digunakan bagi penghasilan sampel pelet tersebut iaitu 0.5 dan 1.5 mm. Enam (6) jenis sampel pelet dihasilkan dan telah diuji dengan ujian proksimat (kandungan lembapan, kandungan tidak stabil, kandungan abu dan kandungan karbon), ujian fizikal (graviti tentu, ketumpatan pukal, ketahanan, panjang dan diameter) dan nilai kalori. Keputusan ujian proksimat menunjukkan perbezaan ketara pada kandungan abu pada saiz partikel yang berlainan bagi pelet yang dihasilkan. Selain itu, keputusan lain bagi ujian proksimat pada saiz partikel telah menunjukkan perbezaan yang ketara. Dalam analisis fizikal, kedua-dua faktor telah menunjukkan perbezaan yang ketara dalam spesifik graviti, ketumpatan, diameter dan panjang. Nilai kalori yang tertinggi adalah daripada bahagian pangkal partikel bersaiz 0.5 mm dengan nilai 20.58MJ/Kg. Sebanyak 35 pasangan dalam ujian korelasi menunjukkan hubungan linear antara satu sama lain sama ada positif ataupun negatif. Secara keseluruhan, setiap bahagian batang pokok dan saiz partikel dalam pelet kayu yang dihasilkan telah menunjukkan kesan kepada ciri-ciri proksimat, fizikal dan juga nilai kalori secara keseluruhannya.

# **APPENDIX X**

# Sample of a Table of Contents page

# **TABLE OF CONTENTS**

			PAGE
DEC	CLARAT	TION	i
ACŀ	KNOWL	EDGEMENT	ii
ABS	TRACT		iii
ABS	TRAK		iv
TAB	BLE OF	CONTENTS	v
LIST	Γ OF TA	ABLES	vi
LIST	Γ OF FI	GURES	vii
LIST	Γ OF AE	BBREVIATIONS	viii
LIST	Γ OF SY	MBOLS	ix
CHA	APTER 1	1 INTRODUCTION	
1.1	Backg	ground of Study	1
1.2	Proble	em Statement	2
1.3	Objec	tives	3
1.4	Signif	ficance of Study	4
CHA	APTER 2	2 LITERATURE REVIEW	
2.1	Litera	ture Review A	5
	2.1.1	Literature Review AA	6
	2.1.2	Literature Review AB	7
2.2	Litera	ture Review B	8
	2.2.1	Literature Review BB	9
		a) Literature Review BBB	10

# **CHAPTER 3 MATERIALS AND METHODS**

3.1	Materials		11			
	3.1.1 Mat	terials A	12			
3.2	Methods		13			
	3.2.1 Met	thods A	14			
CHA	APTER 4 RES	SULTS AND DISCUSSIONS				
4.1	Results and	l Discussions A	15			
4.2	Results and Discussions B					
CHA	APTER 5 CO	NCLUSION AND RECOMMENDATIONS				
5.1	Conclusion		17			
5.2	Recommen	dations	18			
REF	ERENCES		19			
APP	ENDIX A	Biomass conversion	20			
APP	ENDIX B	The appearance of the wood pellets	21			
APP	ENDIX C	Specific gravity of wood pellets	22			

(Font Times New Roman; Size 12; Spacing 1.5)

# **APPENDIX Y**

# Example of a List of Tables

# LIST OF TABLES

No.	TITLE	PAGE
2.1	Wood as percentage of total energy use in some Asian countries.	5
2.2	Swedish pellet standard SS 18 71 20: Classification of fuel pellets.	6
3.1	Result of proximate analysis.	12
4.1	Result of the physical characteristics analysis.	15
4.2	Correlation coefficient analysis.	16

# **APPENDIX Z**

# Example of a List of Figures

# LIST OF FIGURES

No.	TITLE	PAGE
2.1	Diagram of biomass conversion.	5
2.2	The appearance of the wood pellets.	6
3.1	The logs of Leucaena leucocephala has been split before chipping.	12
4.1	Specific gravity of wood pellets in different portions and particles sizes.	15
4.2	Calorific value of wood pellets in different portions and particle sizes.	16

#### APPENDIX AA

#### Example of a List of Abbreviations

#### LIST OF ABBREVIATIONS

ANOVA Analysis of Variance

ASTM America Society for Testing and Materials

CO<sub>2</sub> Carbon Dioxide

Cal/Kg Calorie per Kilogram

EIA Energy Information Administration

FAO Food of Agriculture Organization

FRIM Forest Research Institution Malaysia

MC Moisture Content

MOE Modulus of Elasticity

# **APPENDIX AB**

# Example of a List of Symbols

# LIST OF SYMBOLS

%	Percentage
>	Greater than
<	Less than
$H_{u}$	Heating value
Ø	Diameter
X	Multiply
°C	Temperature (degree Celsius)
ρ	Density (g/cm <sup>3</sup> )

APPENDIX AC

Guideline for Full Report of the Final Year Geoscience Project 2024

CHAPTER	CONTENT	NOTE
COVER	UMK Logo Title of Report Student Name Goal of the report Department, Faculty and University Year of Report	Follow the guideline from FSB (APPENDIX S)
DECLARATION	Declaration Signature Name Date	By the student  ## add declaration (no plagiarism)
APPROVAL	Title of report Name and signature of supervisor	The report must have an approval page signed by the supervisor/s
ACKNOWLEDGMENT	Explain clearly who and institution will be given	
ABSTRACT	In English follow by in Malay	Not more half page each. Containing of study area, purpose and objective of study, method, and conclusion.
TABLE OF CONTENTS	Table of Contents List of Figures List of Tables List of Symbols List of Abbreviations List of Appendices	

Chapter 1 (General Introduction)	1.1 General Background 1.2 Study Area 1.2.1 Location 1.3 Problem Statement 1.4 Objective 1.5 Scope of study 1.6 Significance of study	Student must provide at least two (2) objectives. Maximum number of objective is three (3) For section 1.2, please include:  • A map showing location of the study area with coordinates and road connection from closer city.  • A base map of the study area with contour and road connection Research Importance: E.g.: Benefits to the society, or nation, or employment, or science, etc.
Chapter 2 (Literature Reviews)	<ul> <li>2.1 Introduction</li> <li>2.2 Regional Geology and Tectonic Setting</li> <li>2.3 Stratigraphy</li> <li>2.4 Structural Geology</li> <li>2.5 Historical Geology</li> <li>2.6 Research Specification</li> </ul>	<ul> <li>2.2 Please elaborate state for regional only</li> <li>2.3 Research specification review is based on your research title including geology from previous works. Please explain briefly.</li> </ul>
Chapter 3 (Materials and Methodologies)	3.1 Introduction -Flowchart must attached here. 3.2 Materials/Equipment 3.3 Methodology 3.3.1 Preliminary studies 3.3.2 Field Studies -Sampling methods 3.3.3 Laboratory work 3.3.4 Data processing 3.3.5 Data analysis and interpretation	Not necessary showing all photographs of geological equipment, just give laboratory if it is very important  Describe all the methods in DETAILS for mapping and specification.  Please elaborate in details <i>each of the method you used.</i> Please provide overall research flow chart.

Chapter 4 (Results	4.0 Introduction	This chapter explain everything
and Discussion)	-Brief content of Chapter 4	in your box (depend on the
,	4.1 Accessibility (in the study	study area). A study box covers
	area)	area at least 25 km <sup>2</sup> , with
	4.2 Traversing (Sampling	ratio/scale 1: 25,000.
	Point/Observation Point/	,
	Measurement Point)	This chapter covers <b>mapping</b>
	4.3 Landuse	part of FYP. Several maps and
	4.4 Lithostratigraphy (see note)	figures need to be attached
	4.4.1. Lithology	including:
	distribution Unit	4.4 Geological map and cross
	explanation)	section
	4.4.2. Stratigraphic position	(1) simple geological map in
	(of allunits)	A4 size in the text and
	4.5 Geomorphology	(2) detail geological map in A1
	4.5.1 Geomorphologic	size as appendix.
	classification (with	*Compulsory for petrography
	geomorphologic unit	analyses (thin section) but also
	map)	depending on study area. If
	4.5.2 Weathering	study area is entirely located in
	(depends ondrainage	an alluvium area, the grain size
	pattern)	analysis/ determination the
	4.5.3 Drainage pattern	type of soil should be
		conducted.
	4.6 Structural Geology	
		- Stratigraphy lithostratigraphy
	4.7 Historical Geology	and stratigraphic column
		4.5 Geomorphology
	4.8 Specification (Results and	Geomorphologic map -for no
	discussion)	structure area
	,	
		4.7 Historical Geology (finding
		in your study area,
		highlighting the process
		chronologically what
		happened there)
		(*It is suggested that Chapter 4
		and 5 are related to each other)

#### NOTE:

#### Lithostratigraphy

(Geological Map & Cross section)

- The geological map consists of geological features including lithologic unit distribution, geological structure, strike-dip of beds, foliation, fossils, dyke/sill, etc.
- Explanation of lithostratigraphical position of each unit (draw stratigraphical column)
- Briefly explanation of the unit rock composition

#### **Unit explanation**

Explain each unit, started from the oldest to the youngest

- Distribution horizontal (in the geological map) and vertical (from cross section) andthickness
- Detail rock composition of the unit
- Detail explanation of each rock in the unit
- Petrography of rock in the unit
- Geochemistry of rock in the unit (if any)
- Fossil content (if any)
- Age of the unit
- Deposition environment/magmatism/facies metamorphism
- Correlation of the units to regional stratigraphy

#### Example:

Show the geological map and cross section,

Example tour geological map has 4 lithostratigraphic units: schist unit, sandstone unit, granite, and alluvium).

- Draw stratigraphy position of the 4 units in the geological map. Remember the oldest has tobe in the lowest position.
- Explain one by one your lithostratigraphic unit. Started from the oldest unit to the youngestunit. In that example (a) the schist and sandstone units are intruded by granite, latest all of themare covered by alluvium.
- Unit explanation:

#### o A. Schist unit:

- Composition of the schist unit: dominated by schist, with gneiss and metasediments
- Explain schist, gneiss and metasediments, one by one started from the schist including field feature (colour, foliation, etc), hand specimen, petrographic feature (mineral composition, facies, etc.)

#### o B. Sandstone unit:

- Composition of the sandstone unit: dominated by sandstone with mudstone, siltstone, and shale intercalations
- Explain sandstone, mudstone, siltstone, and shale, one by one started from the sandstone, including field feature (colour, bedding, sedimentary structure, etc.),hand specimen, petrographic feature (texture, structure, and composition)

#### o C. Granite

- Lithologic composition
- Explain one by one of the rocks including field feature,

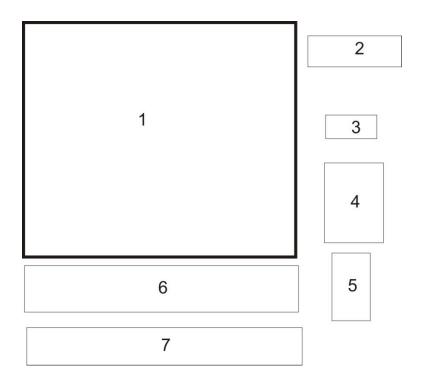
hand specimen, petrography.

- o D. Alluvium
  - o Same as above

#### **GEOLOGICAL MAP**

You have two geological map, one simple geological map in the text (A4 size) and the other detailgeological map as appendix (A1 size). Here is the layout of that.

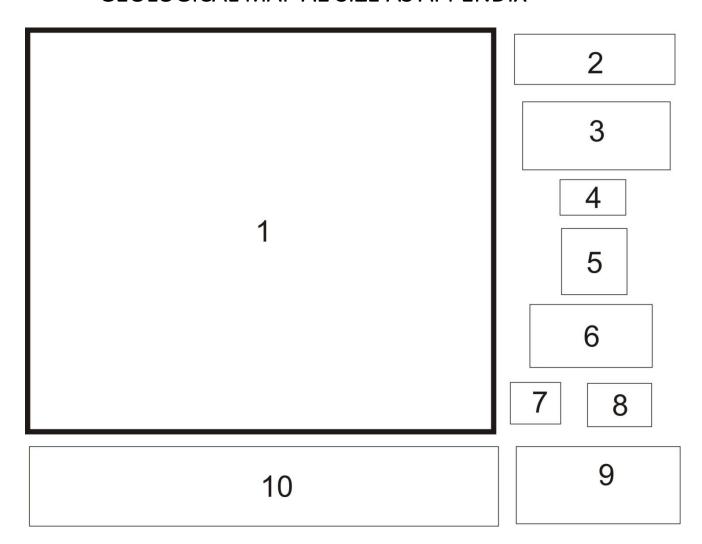
# GEOLOGICAL MAP A4 SIZE IN THE TEXT



#### **EXPLANATION:**

- 1. Geological Map
- 2. Scale (bar scale)
- 3. Stratigraphy
- 4. Legend
- 5. Other explanations (if needed)
- 6. Cross section
- 7. Figure explanation: Figure 4.... Geological map of......area.

# **GEOLOGICAL MAP A1 SIZE AS APPENDIX**



#### **EXPLANATION:**

- 1. Geological Map
- 2. University logo (followed by Faculty and Department)
- 3. Title of the geological map: GEOLOGICAL MAP OF.....
- 4. Student name and matrix number
- 5. Stratigraphy (showing stratigraphic position of all lithostratigraphic units)
- 6. Legend: description of all lithostratigraphic units, geological symbol (fault, bedding, foliation, mining, hot spring, ectc) and other explanation e.g. river and lake
- 7. Truw north and magnetich north
- 8. Box location (showing location of the box with surrounding cities)
- 9. Cross section

