

# **FINAL YEAR PROJECT I & II (PSM1 & PSM2)**

## **BACHELOR OF COMPUTER SCIENCE (NETWORKING)&(COMPUTER SECURITY)**

*PREPARED BY:  
PSM/PD COMMITTEE FTMK  
UTeM*

# Outline

1. Introduction
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8. FYP Evaluation
9. FYP Proposal Form
10. FYP Log Report
11. Report Preparation
12. Lecturer's Expertise
13. Others
14. Q&A

# 1.0 Introduction – Subject code

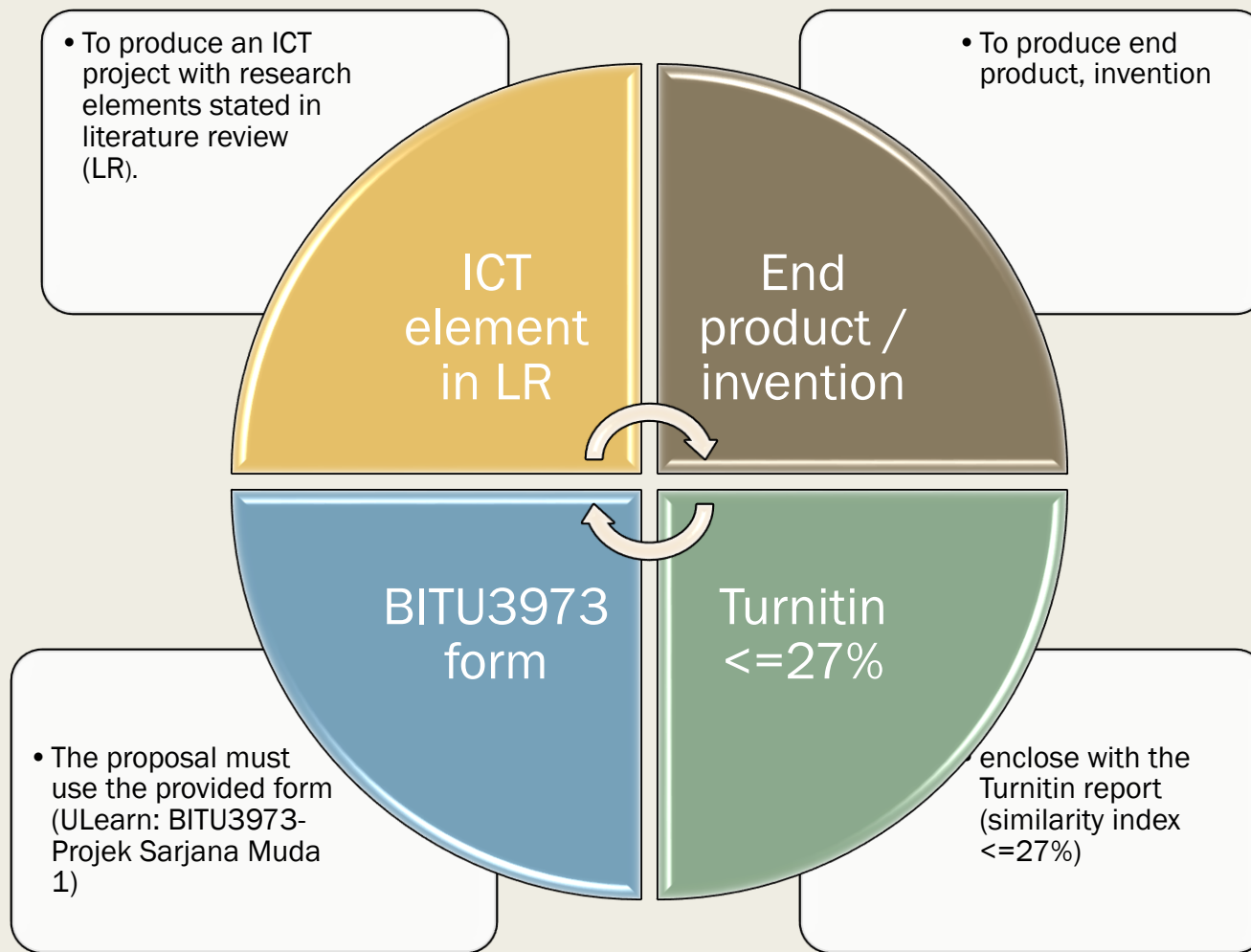
- Individual project
- Total of 6 credits
- The registration requirements of the code and its subject :

Code	Subject	Pre-Requisite
<b>BITU 3973 (3 credits)</b>	<b>Projek Sarjana Muda 1 <i>Final Year Project 1</i></b>	<b>BITU 3923 (Workshop 2)</b>
<b>BITU 3983 (3 credits)</b>	<b>Projek Sarjana Muda 2 <i>Final Year Project 2</i></b>	<b>BITU 3973</b>

- Implemented in 2 semesters (PSM 1 and PSM 2) i.e before the students undergo industrial training
- Students will not be allowed to undergo Industrial Training if failed in PSM

# 1.1 Introduction – FYP goal

FYP offers avenues for YOU to **apply** and **explore** what you have learnt during your study and provides opportunity for you to **demonstrate** your **competencies** and **creativity**.



## 2.0 How to start your FYP?

### Title:

Student need to select suitable title from proposed field & category and must include **research element** in their analysis/system development.



### Field :

Network

Security



### Category:

**Type I:** System / Tool development

**Type II:** Analysis



### Output:

Simulation

Prototype

System/  
application

Script

Image

## 2.1 FYP Title (Example)

- Evaluating KISMET and WIFI Manager as Wireless IDS
- Development of Dual-IP Web Based Router Configuration System
- Development of Remote System for Home-Light Management
- Development of WebCam-SMS-Online DataBase Home Security System
- Comparison of IPv6 and IPv4 Proxy Server Implementation
- Analysis of Botnet Analysis using DNS Traffic
- Web Based Device Control and Communication via Parallel Port
- Comparison of QOS in IPv4 and IPv6 Network Environment
- Comparison of VOIP Performance on IPv4 and IPv6 Network
- Comparison between IPv4 and IPv6 over Wireless LAN Technology
- The Study of IP Spoofing
- A Simulation of Elliptic Curve Diffie-Hellman as a Teaching Tool
- AES and DES System as a Teaching Tool
- Implementation of Network Rendering Farm Using Farmer-Joe Engine
- Development of Bluetooth Quiz System for Network Security Subject in FTMK
- Development of Dirham Point of Sale System with Infrared Technology Enhancement

# 2.1 FYP Title (Example) -cont

- Cash on delivery system using Raspberry PI Barcode Scanner
- Book Reader For Blind People
- The Vehicles Access Entry using Raspberry PI and RFID
- Smart Door Notify
- Image restoration using inverse filter and wavelet-based image
- Recognize type of trees by its leaves using statistical method in pattern recognition
- Generalized Character Recognition on Car License Plate
- The segmentation of satellite image using image edge detection and watershed transform techniques
- Network Design for Universal Cyclone Sdn. Bhd. using System Approach
- Wireless Signal Strength Monitoring Using Android Apps
- Smart Home Automation System
- Network Analysis Performance for Majlis Perbandaran Hang Tuah Jaya Malacca
- Performance Analysis of Various Switching Solutions
- User Acceptance of Crowd Sourcing Technology in Rural and Urban Area in Malaysia
- Applying Technology Acceptance Model to Compare Network Monitoring System for Educational Purpose
- Video based Hyper-Focal Imaging Method for Pupil Detection

## 3.0 FYP field - Networking

- Computer System (eg. Kernel, RAID, GRID Computing, etc)
- Computer Networking (eg. IPv6 migration, Redesign network, etc)
- Multimedia Networking
- Wireless Networking (Ad Hoc, Sensor, Security, performance analysis)
- Image Processing (Encryption, Classification, Segmentation, Soft computing)
- Application Development based on the above research field (eg NMS, TCP/IP Programming, Network Programming interfacing, agent, etc)
- Mobile Communication
- Embedded system
- IoT, CPS, QoS, QoE
- Network Monitoring System/Tool
- Network Management System/Tool
- RFID System integrate with features



## 3.1 FYP field - Security

- Computer Security (eg: IDS, Firewall, IPS, etc)
- Mobile/Wireless (eg. Security, performance analysis)
- Cryptography
- Computer and Network Forensic
- Virus
- Network Security (IDS, Malware, anti-virus etc)
- Watermarking
- Steganography
- IPV6 security
- System Security
- Sensor Security
- Sandbox
- Honeypot/HoneyNet
- Biometric

## 4.0 FYP category (Networking)

### Type I – System/tool development

#### Example of Type I:

- IoT Based Smart Patients Monitoring System
- QoS on Live Video Streaming Over IPv6 and IPv4
- Server Monitoring Systems
- Home Security Alarm System (Motion Sensor and Open Door Detector)
- Wireless Automatic Connection by Using Ad-Hoc
- Raspberry Pi/Arduino related projects
  - *Must have end-user interface (eg. Web interface/mobile apps)*
  - *Must consists of project integration (eg. Smart parking system must consist of sensing and billing.)*

## 4.1 FYP category (Networking)

### Type II – Analysis

#### Example of Type II:

#### Analyzing Protocol/Network

- Measures (Performance, Normal & Abnormal Behavior, etc...)

#### Wireless Network

- Authentication Tools & Techniques
- Performance Analysis
- Bluetooth Application
- Wireless IPv6 Analysis

## 4.2 FYP category (Security)

### Type I – System/tool development

#### Example of Type I:

- Cryptology Algorithms or Application Development
- Security Application Development
- Developing Kernel-level Rootkit Malware Detection Tool
- Developing Data Carving Algorithm for Contiguous Data in Linux System
- Development of secure keyboard using Arduino Leonardo: encryption module

## 4.3 FYP category (Security)

### Type II - Analysis

#### Example of Type II:

- Security Application Comparison
- Malicious Code Pattern Analysis
- Feature Selection for HTTP Botnet Detection
- Linear Regression for Malware Analysis
- Development of Weblink Crawler for Inspecting Broken Link
- Analysis of Data Hiding
- Peer-to-Peer (P2P) Botnet Behaviour Analysis

## 4.4 FYP Output

### Type I : Product Based

- Application or system development
- Focuses on the output/end product that can be used by the end-users
- Application can be applied to an appropriate domain

### Type II: Analysis Based

- Simulation result analysis
- Test bed analysis
- Scripting
- Enhancement of the research
- Analysis recommendation

# 5.0 FYP 1 – Milestones

Week	Activity	Note / Action
1 Meeting 1	Proposal PSM: Discussion	Deliverable – Proposal Action – Student
	Proposal assessment & verification	Action – Supervisor, PSM/PD Committee
2	Proposal Correction/Improvement	Action – Student
	List of supervisor/title	Action – PSM/PD Committee
3 Meeting 2	Proposal Presentation & Submission via PSM Online System Chapter 1 (System Development Begins)	Deliverable – Proposal Presentation (PP)(if applicable) Action – Student
4	Chapter 1 Chapter 2	Deliverable – Chapter 1 Action – Student, Supervisor
5	Chapter 2	Action – Student
6 Meeting 3	Chapter 2 Chapter 3	Deliverable – Chapter 2 Progress Presentation 1 / Pembentangan Kemajuan 1 (PK 1) Action – Student, Supervisor
	Student Status	Warning Letter 1 Action – Supervisor, PSM/PD Committee
7	Chapter 3 Chapter 4	Action – Student
8	Chapter 4 Project Demo	Deliverable: Chapter 3 Action – Student, Supervisor
9 Meeting 4	Chapter 4 Project Demo	Deliverable – Progress Presentation 2 / Pembentangan Kemajuan 2 (PK 2) Action – Student, Supervisor
	Student Status	Warning Letter 2 Action – Supervisor, PSM/PD Committee
MID SEMESTER BREAK		
10 Demonstration	Project Demo	Action – Student
	Determination of student status (Continue/Withdraw)	Submit student status to Committee Action – Supervisor, PSM/PD Committee
11	Project Demo PSM1 Report	Action – Student, Supervisor
12 Meeting 5	Project Demo PSM1 Report	Action – Student, Supervisor Action – PSM/PD Committee
	Schedule the Presentation	Presentation Schedule
13	Project Demo	Deliverable – Complete PSM1 Draft Report (Chapter 1-4) Action – Student, Supervisor
14	<b>FINAL PRESENTATION</b> Submission of the PSM1 Report onto the PSM e-Repository online system.	Action – Student, Supervisor, Evaluator, PSM/PD Committee
15	<b>REVISION WEEK</b> Correction on the draft report based on the comments by the Supervisor and Evaluator during the final presentation Session. Submit PSM1 Logbooks to PSM e-Repository online System	Deliverable – Complete PSM1 Logbooks Action – Student, Supervisor
	Submission of overall marks to PSM/PD committee	Deliverable: Overall PSM1 score sheet Action – Supervisor, Evaluator, PSM/PD Committee
16 & 17	FINAL EXAMINATION WEEKS	

# 5.1 FYP1 Milestones

- FYP 1 - 14 weeks (in Semester 2 based on Academic Handbook)
- Activities included:
  - *Title selection*
  - *Project Proposal(Title, Problem Statement, Objectives and etc )*
  - *Supervisor selection*
  - *Approval and agreement on the proposal by supervisor*
  - *Approval of the proposal by JK PSM Dept level*
  - *Project progress 1 and 2 reported to supervisor*
  - *FYP 1 presentation with demonstration by student and evaluated by supervisor and evaluator*
  - *Upload FYP Proposal form, FYP1 Report, Log book into e-Repository system*



## 5.2 FYP 2 Milestones

Week	Activity	Note / Action
1 <b>Meeting 1</b>	Chapter 4 Chapter 5	Deliverable – <b>Chapter 4</b> Action – Student, Supervisor
2 <b>Meeting 2</b>	Chapter 5 Project Demo	Deliverable – <b>Progress Presentation 1 / Pembentangan Kemajuan 1 (PK 1)</b> Action – Student, Supervisor
3	Chapter 5 Chapter 6	Deliverable – <b>Chapter 5</b> Action – Student
	Student Status	Warning Letter 1 Action – Supervisor, PSM/PD Committee
4 <b>Meeting 3</b>	Chapter 6 Project Demo	Deliverable – <b>Progress Presentation 2 / Pembentangan Kemajuan 2 (PK 2)</b> Action – Student, Supervisor
5 <b>Meeting 4</b>	Chapter 6 Chapter 7	Deliverable – <b>Chapter 6</b> Action – Student, Supervisor
	Presentation schedule	Action – PSM/PD Committee
	Student Status	Warning Letter 2 Action – Supervisor, PSM/PD Committee
6 <b>Meeting 5</b>	Chapter 7 Project Demo PSM2 Report	Deliverable – <b>Chapter 7 &amp; Complete PSM2 Draft Report</b> Action – Student, Supervisor
	Determination of student status (Continue/Withdraw)	Submit student status to Committee Action – Supervisor, PSM/PD Committee
7 <b>Final Presentation</b>	<b>FINAL PRESENTATION &amp; PROJECT DEMO</b>	Action – Student, Supervisor, Evaluator & PSM/PD Committee
8	<b>FINAL EXAMINATION WEEK</b> Correction on the draft report based on the comments by the Supervisor and Evaluator during the final presentation session Submit PSM2 Logbooks to PSM Online System	Deliverable – <b>Complete PSM2 Logbooks</b> Action – Student, Supervisor
	Submission of overall marks to PSM/PD committee	Deliverable: <b>Overall PSM2 score sheet</b> Action – Supervisor, Evaluator, PSM/PD Committee
9	<b>INTER-SEMESTER BREAK</b> Submission of the final complete report, which is the updated & corrected PSM2 report, onto the PSM e-Repository online system	Deliverable – <b>Complete Final PSM Report</b> Action – Student, Supervisor

## 5.3 FYP 2 Milestones

- FYP 2 – 7 weeks (in short semester according to Academic handbook)
  
- Activities included:
  - *Continuation project from FYP 1*
  - *Project progress 1 and 2 reported to supervisor*
  - *FYP 2 presentation with demonstration by student and evaluated by supervisor and evaluator*
  - *Upload complete FYP 2 report, Log book, Turnitin Report, program into e-Repository system*
  - *Submit 1 CD – FYP 2 report ONLY to PSM/PD committee*
  - *Submit 1 CD – Everything related to FYP (Proposal, Report, Log book, Slides, Turnitin report, System/Program/Algorithm etc) to supervisor*

# 6.0 Student's responsibility-Approval

- Selection of Title and Summary of the Project Proposal
  - *Need to provide information related to the project according to the Literature Review*
  
- Selection of Supervisor
  - *Student must propose the title and summary of the research proposal to the selected supervisor*
  - *Student is responsible to get approval*

- PSM Proposal Form: U-Learn Submit before Sem2-20202021 start (15 March 2021)
- Make sure you obtain your SV signature to confirm supervision. Otherwise, leave the supervisor signature part empty and later you'll be appointed a supervisor

## 6.3 Student's responsibility

### – Meeting your supervisor

- Student are required to meet their supervisor for at least **5 times (5x)** per semester.
- If failed to do so, warning letter from supervisor will be issued in the following week:
  - ✓ **Week 6 :** *First warning letter*
  - ✓ **Week 10:** *Second warning letter*
- FYP presentation will start at **week 15**

# 7.0 FYP Problems - Supervisor

## ■ Supervisor?

- *Busy (meeting, project, classes, etc)*

## ■ How to solve it?

- *Make an appointment*
- *Produce your Gant Chart*
- *Follow your Gant Chart*

## 7.1 FYP problems - Students

- *Do not have titles*
- *Do not know what they are doing*
- *Do not meet supervisors*
- *Not serious / Take it easy*
- *Try to get minimum passing marks from supervisor and evaluator.*
- *Give a lot of reasons.*
- *Do not know FYP standards*


# 8.0 FYP Evaluation

PSM 1	100%
Project progress Report	
Proposal Report	40%
Progress 1 Presentation	
Progress 2 Presentation	
Final Presentation (Supervisor)	
Demo	25%
PSM 1 Report	
Others	
Final Presentation (Evaluator)	
Demo	35%
PSM 1 Report	
Presentation	

PSM 2	100%
Project progress Report	
Progress 1 Presentation	20%
Progress 2 Presentation	
Final Presentation (Supervisor)	
Demo	45%
PSM 2 Report	
Others	
Final Presentation (Evaluator)	
Demo	35%
PSM 2 Report	
Presentation	

# 10.0 Proposal Form

- Summary
- Background
- Objective
- Scope
- Requirements
- Verification

 <b>UNIVERSITI TEKNIKAL MALAYSIA</b> <b>FACULTY OF INFORMATION AND COMMUNICATION TECHNOLOGY</b> <b>PROJEK SARJANA</b> <b>PROPOSAL FORM</b> <i>(Incomplete form will be rejected)</i>	
<b>A</b>	<b>TITLE OF PROPOSED PROJECT:</b> Tajuk projek yang dicadangkan : Your Proposed Project Title Here
<b>B</b>	<b>DETAILS OF STUDENT / MAKLUMAT PELAJAR</b>
<b>B(i)</b>	<b>Name of Student: Identity card no.:</b> Nama Pelajar: No. Kad Pengenalan : Your Name Here No. Kad Pelajar :
<b>B(ii)</b>	<b>Correspondence Address:</b> Alamat Surat Menyurat : Your Correspondence Address Here
<b>B(iii)</b>	<b>Program Pengajian:</b> Study Program: <input type="checkbox"/> BITC <input type="checkbox"/> BITD <input type="checkbox"/> BITI <input type="checkbox"/> BITM
<b>B(iv)</b>	<b>Home Telephone No.: Handphone No.:</b> No. Telefon Rumah: 00-000 0000
<b>B(v)</b>	<b>E-mail Address:</b> Alamat e-mel: your_email@abc.com
<b>B(vi)</b>	<b>Type of Service (Please tick):</b> Jenis Perkhidmatan (Sila tandai): Permanent <input type="checkbox"/> Contract (State contract) <input type="checkbox"/> Tetap    Kontrak (Nyatakan tarikh)

1

UTM/FTMK/PSM/H

<b>C</b>	<b>PROJECT INFORMATION / MAKLUMAT PROJEK</b>
<b>C(i)</b>	<b>Project Area (Please tick):</b> Bidang Projek (Sila tandai 'x' jika): <input type="checkbox"/> A. Intelligent Information Systems Sistem Informasi Pintar <input type="checkbox"/> B. Software Technology Teknologi Perisian <input type="checkbox"/> C. Database Technology Teknologi Pengkalan Data <input type="checkbox"/> D. Computer System Technology Teknologi Sistem Komputer <input type="checkbox"/> E. Computer and Network Security Komputer dan Keselamatan Rangkaian <input type="checkbox"/> F. Networking and Distributed Computing Rangkaian dan Pengkomputeran Teragih <input type="checkbox"/> G. Immersive Technology Teknologi Immersif
<b>C(ii)</b>	<b>Duration of this project (Maximum 12 months):</b> Tempoh masa projek ini (Maksimum 12 bulan): Duration: 4 months Tempoh : From : 18-Feb-2012 Dari : To : 7-Jun-2013 Hingga :
<b>C(v)</b>	<b>Executive Summary of Project Proposal (maximum 300 words)</b> (Please include the background of project, literature reviews, objectives, project methodology and expected outcomes from the project) Ringkasan Cadangan Eksekutif Projek (maksima 300 patah perkataan) (Meliputi latar belakang projek, kajian literatur, kaedah projek, objektif dan jangkaan hasil projek)

2



C(vi)	<p><b>Detailed proposal of project:</b> Cadangan maklumat projek secara terperinci:</p> <p>(a) <b>Project background including Introduction / Problem Statements and Literature Reviews.</b> Keterangan latar belakang projek termasuk pengenalan / pernyataan masalah dan kajian literatur.</p> <ol style="list-style-type: none"> <li>1. Introduction</li> <li>2. Problem Statements</li> <li>3. Literature Review</li> </ol> <p>(b) <b>Objective (s) of the Project</b> Objektif Projek</p> <p>Example /Contoh:</p> <p>This project embarks on the following objectives:</p> <ol style="list-style-type: none"> <li>1. To investigate ...</li> <li>2. To assess ...</li> <li>3. To make recommendations based on ...</li> </ol> <p>(c) <b>Project Methodology</b> Kaedah projek</p> <p>Please state in the form / Sila nyatakan di borang ini</p> <ol style="list-style-type: none"> <li>1. Description of Methodology</li> <li>2. Flow Chart of Project Activities ( Please enclose in the Appendix)</li> <li>3. Gantt Chart of Project Activities (Please enclose in the Appendix)</li> <li>4. Milestones and Dates</li> </ol> <p>(d) <b>Expected Results/Benefit</b> Jangkaan Hasil Projek</p> <ol style="list-style-type: none"> <li>1. Novel theories/New findings/Knowledge</li> <li>2. Project Publications</li> <li>3. Specific or Potential Applications (if any)</li> </ol>	<table border="1"> <thead> <tr> <th data-bbox="981 115 1033 182">F (ii)</th> <th data-bbox="1033 115 1425 182">Recommended by the Supervisor Perakuan oleh Penyelia</th> <th data-bbox="1425 115 1850 182">Recommendation by the Evaluator Perakuan oleh Penilai</th> </tr> </thead> <tbody> <tr> <td data-bbox="981 182 1033 796"></td> <td data-bbox="1033 182 1425 796"> <p>Please tick (✓) Silatandakan (✓)</p> <p>Recommended: Diperakukan:</p> <p><input type="checkbox"/> A. Highly Recommended Sangat Disokong</p> <p><input type="checkbox"/> Recommended Disokong</p> <p><input type="checkbox"/> Not Recommended (Please specify reason) Tidak Disokong (Sila Nyatakan Sebab)</p> <p>General Comments: Ulasan umum:</p> <div data-bbox="1045 511 1416 615" style="border: 1px solid black; height: 70px; width: 100%;"></div> <p>Supervisor's Name: Supervisor's Name Here Nama Penyelia:</p> <p>Signature: Tandatangan:</p> <p>Date: Tarikh: DD-MMM-2012</p> </td> <td data-bbox="1425 182 1850 796"> <p>Please tick (✓) Silatandakan (✓)</p> <p>Recommended: Diperakukan:</p> <p><input type="checkbox"/> A. Highly Recommended Sangat Disokong</p> <p><input type="checkbox"/> Recommended Disokong</p> <p><input type="checkbox"/> Not Recommended (Please specify reason) Tidak Disokong (Sila Nyatakan Sebab)</p> <p>General Comments: Ulasan umum:</p> <div data-bbox="1437 511 1818 615" style="border: 1px solid black; height: 70px; width: 100%;"></div> <p>Evaluator's Name: Evaluator's Name Here Nama Penilai:</p> <p>Signature: Tandatangan:</p> <p>Date: Tarikh: DD-MMM-2012</p> </td> </tr> <tr> <td colspan="3" data-bbox="981 796 1850 1095"> <div data-bbox="1437 839 1843 1093" style="border: 1px solid black; height: 150px; width: 100%;"></div> <p>PSM &amp; PD COMMITTEE Comments</p> </td></tr> </tbody> </table>	F (ii)	Recommended by the Supervisor Perakuan oleh Penyelia	Recommendation by the Evaluator Perakuan oleh Penilai		<p>Please tick (✓) Silatandakan (✓)</p> <p>Recommended: Diperakukan:</p> <p><input type="checkbox"/> A. Highly Recommended Sangat Disokong</p> <p><input type="checkbox"/> Recommended Disokong</p> <p><input type="checkbox"/> Not Recommended (Please specify reason) Tidak Disokong (Sila Nyatakan Sebab)</p> <p>General Comments: Ulasan umum:</p> <div data-bbox="1045 511 1416 615" style="border: 1px solid black; height: 70px; width: 100%;"></div> <p>Supervisor's Name: Supervisor's Name Here Nama Penyelia:</p> <p>Signature: Tandatangan:</p> <p>Date: Tarikh: DD-MMM-2012</p>	<p>Please tick (✓) Silatandakan (✓)</p> <p>Recommended: Diperakukan:</p> <p><input type="checkbox"/> A. Highly Recommended Sangat Disokong</p> <p><input type="checkbox"/> Recommended Disokong</p> <p><input type="checkbox"/> Not Recommended (Please specify reason) Tidak Disokong (Sila Nyatakan Sebab)</p> <p>General Comments: Ulasan umum:</p> <div data-bbox="1437 511 1818 615" style="border: 1px solid black; height: 70px; width: 100%;"></div> <p>Evaluator's Name: Evaluator's Name Here Nama Penilai:</p> <p>Signature: Tandatangan:</p> <p>Date: Tarikh: DD-MMM-2012</p>	<div data-bbox="1437 839 1843 1093" style="border: 1px solid black; height: 150px; width: 100%;"></div> <p>PSM &amp; PD COMMITTEE Comments</p>		
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- PSM Proposal Form: U-Learn Submit before Sem2-20202021 start (15 March 2021)
- Make sure you obtain your SV signature to confirm supervision. Otherwise, leave the supervisor signature part empty and later you'll be appointed a supervisor

# 11.0 FYP 1 & FYP 2 : Log report

## ■ Log Report

- Students must *write their FYP activities* in their log report.
- Students must *write their discussion* with the supervisor in their log report. The report requires date (as stated in milestones), and both student's and *supervisor's signatures*

# 12.0 FYP Output

Output FYP 1 – Sem 2 (14 weeks)	Output FYP 2 – Short Sem (8 weeks)
<ul style="list-style-type: none"><li>- Up to Implementation</li><li>- Complete prototype (min 70%)</li><li>- Complete analysis(min 70%)</li><li>- Complete System / tool (min 70%)</li></ul>	Product/Analysis Complete Testing and Result Analysis
<p>Treatment Documentation (1-4)</p> <ul style="list-style-type: none"><li>•Type I: System/tool development<ul style="list-style-type: none"><li>• literature review</li><li>• system design (DFD, Context Diagram if any)</li><li>• Algorithm</li></ul></li><li>• Type II: Analysis<ul style="list-style-type: none"><li>• literature review</li><li>• experimental / testbed design</li><li>• scripting design</li><li>• simulation design</li></ul></li></ul>	Complete Report (chapter 1-7)

# 12.1 FYP Report format - General

Proposed	Description
<ul style="list-style-type: none"><li>• General Content<ul style="list-style-type: none"><li>• Chapter 1, 2, 3, 7</li></ul></li></ul>	<p>Chapter 1: Introduction</p> <ul style="list-style-type: none"><li>- Intro</li><li>- Background</li><li>- PS, PQ, PO, Pscope, PC, report organization, conclusion</li></ul> <p>• Chapter 2: Literature Review</p> <ul style="list-style-type: none"><li>- Intro, Related work/previous work</li><li>- critical review of current problem, justification</li><li>- proposed solution/further project</li><li>- conclusion</li></ul> <p>• Chapter 3: Project Methodology</p> <ul style="list-style-type: none"><li>- Type I System: follow SE method</li><li>- Type II Analysis: experimental, testbed, simulation, pilot test, survey</li><li>- describe activities/steps/stages involved (milestones/gantt chart)</li></ul>

# 12.1 FYP Report format - General

Proposed	Description
<ul style="list-style-type: none"><li>• General Content<ul style="list-style-type: none"><li>• Chapter 1, 2, 3, 7</li></ul></li></ul>	<p>Chapter 7: Project Conclusion</p> <ul style="list-style-type: none"><li>- Intro</li><li>- Project Summarization</li><li>- Project Contribution</li><li>- Project Limitation</li><li>- Future Works</li><li>- Conclusion</li></ul>

# 12.2 FYP Report format

## - Specific

Proposed	Description
<ul style="list-style-type: none"> <li>• Specific content             <ul style="list-style-type: none"> <li>• Chapter 4, 5, 6</li> </ul> </li> </ul>	<p><u>Type I: System</u></p> <ul style="list-style-type: none"> <li>•Chapter 4: Analysis &amp; Design             <ul style="list-style-type: none"> <li>- follow SE e.g. DFD</li> </ul> </li> <li>•Chapter 5: Implementation             <ul style="list-style-type: none"> <li>• follow SE</li> </ul> </li> <li>•Chapter 6: Testing             <ul style="list-style-type: none"> <li>•method/step how to test and analyze</li> <li>•follow SE</li> </ul> </li> </ul> <p><u>Type II: Analysis</u></p> <ul style="list-style-type: none"> <li>•Chapter 4: Design             <ul style="list-style-type: none"> <li>- testbed design, experimental design, simulation design</li> <li>- architecture (network - logical/physical)</li> </ul> </li> <li>•Chapter 5: Implementation             <ul style="list-style-type: none"> <li>• eliminate step on h/w &amp; s/w configuration</li> </ul> </li> <li>•Chapter 6: Testing &amp; Analysis             <ul style="list-style-type: none"> <li>•method/step how to test and analyze</li> <li>•comparative analysis of the result</li> </ul> </li> </ul>

# 12.3 Literature Review References

## ■ Minimum Requirements for PSM Reports

- *10 related Conference Papers*
- *2 related Journals Papers*
- *Books*
- *Websites*

## ■ Minimum Requirements for PSM Proposal

- *3 related Papers (Conference or Journal)*
- *Books*
- *Websites*
  - Websites classified as weak references

## 12.4 Report preparation – FYP 1

- Format for report preparation is referring to  
“Panduan Format Penyediaan Laporan Akhir Projek Sarjana Muda Fakulti Teknologi Maklumat dan Komunikasi, Universiti Teknikal Malaysia Melaka”
- FYP 1
  - *Report preparation is referring to the books guideline*
  - *Prepare at least until Chapter 4*



## 12.4 Report preparation – FYP 2

### ■ FYP 2

- *Final report has been approved by supervisor and evaluator.*
- *Final report has been signed by student and supervisor.*
- *Student must upload Proposal report, FYP report, Turnitin report, log book, program in ULEARN*
- *Students can be failed if it does not meet the conditions set.*

# 13.1 Project TIPS

- Get the first draft out as soon as possible
- Don't kill yourself trying to get perfection for the first time
- Make sure you and your supervisor know what is going on
- Write as you go along, not at the last minute

# 14.0 Lecturer's expertise

No	Name	Expertise
1	Prof. Dr. Shahrin bin Sahib @ Sahibuddin	Computer and Network Security, Software Security Testing, Computer Forensic
2	Prof. Dr. Rabiah binti Ahmad	Information Security, Anti Cyberterrorism, Health Information Security and Management, Information Mining and Analysis, Risk Analysis, Health Informatics, Applied Cryptography , Genetic Algorithm, Research Management
3	Prof. Madya Dr. Mohd Faizal bin Abdollah	Intrusion Detection System, Computer and Network Security, Forensic, Mobile and Wireless Security, Network Management, Networking.
4	Prof Madya Dr. Nor Azman bin Abu	Cryptography, Image Processing, Euclidean Travelling Salesman Problem
5	Dr. Siti Rahayu bt. Selamat	Computer and Network Forensic, Computer and Network Security, Software Security Testing
6	Dr. Robiah bt. Yusof	Computer and Network Security, Computer Forensic, Malware, Intrusion Detection System, Network Management.
7	Mohammad Radzi bin Motsidi	QoS and QoE of Wireless Network, Computer Security, Network Performance Analysis
8	Dr. Nurul Azma bt. Zakaria	IPv6 Migration, IoT, CPS, Embedded System Design, Computer System and Communication
9	Dr. Shekh Faisal bin Abdul Latip	Design of symmetric-key primitives and security protocols, Cryptanalysis of cryptographic algorithms and security protocols, Side-channel analysis of cryptosystems.
10	Dr S.M. Warusia Mohamed	Intrusion Detection System, Network Security And Data Mining
11	Haniza bt. Nahar	Wireless Network Performance, Network Administration, Networking

# 14.0 Lecturer's expertise

12	Mohd Zaki bin Mas'ud	Malware Analysis, Computer Forensic And Network Security
13	Dr. Nazrulazhar bin Bahaman	Ipv6 Migration, IoT, Computer Network
14	Dr Norharyati bt. Harum	Signal Processing, Wireless Communication, IoT, Mobile Communication
15	Dr Othman bin Mohd	Image Processing, Network Management, Remote Sensing, Geographic Information System, Management Information System
16	Dr Zulkiflee bin Muslim	Ipv6 IDS, Feature Selection
17	Dr Aslinda bt. Hassan	Network Performance Modelling And Analysis, Network Protocols In Ad Hoc Network, Network Programming Interfaces
18	Khadijah bt. Wan Mohd Ghazali	Computer And Network Security
19	Marliza bt. Ramly	Network Sensor Analysis
20	Dr Mohd Fairuz Iskandar bin Othman	IT Governance And Management, IT Security, NeuroIS
21	Mohd. Rizuan bin Baharon	Cryptography, Cloud Security, Privacy-preserving Data Aggregation

# 14.0 Lecturer's expertise

23	Muhammad Syahrul Azhar bin Sani	Network Performance Analysis, Routing In Mobile Ad Hoc Network
24	Suhaimi bin Basrah	Information Theory, Watermarking, Multimedia Networking, Network Coding
25	Dr Syahrulnaziah bt. Anawar	Network Routing And Management, Pervasive And Ubiquitous Computing, Human Centric Computing
26	Dr. Wahidah bt. Md. Shah	P2P Network, Network Performance Analysis
27	Dr. Zaheera binti Zainal Abidin	Network Management, Network Security, Wireless Security, Image Processing, Pattern Recognition And Biometrics.
28	Zakiah bt. Ayop	Network Routing , Network Performance Analysis.
29	Dr Zurina bt. Sa'aya	Information Retrieval, Recommender System.
30	Dr Raihana Syahirah Abdullah	Network Security, Malware And Network Analysis
31	Nur Fadzilah Othman	Usable Security
32	Irda Roslan	WLAN, Computer System and Communication

# 14.0 Lecturer's expertise

33	Erman Hamid	Network Performance Analysis, Routing In Mobile Ad Hoc Network
34	Nor Azman Mat Ariff	Pattern Recognition And Network Management
35	Ariff bin Idris	Wireless Network
36	Mohd Najwan Khambari	Networking

# 15.0 Others - Important Notes

	PSM 1	PSM 2
<b>Meet SV</b>	At least 5x	At least 3x
	<i>Otherwise, you will get a <b>Warning Letter</b>. Two letters may lead to bar from presentation.</i>	
<b>Progress Status</b>	Determine at Week 11	Determine at Week 5
	<i>May withdraw but due at Week 13 (Sem 2)</i>	<i>May withdraw but due at Week 6 (Sem Khas)</i>
<b>Presentation</b>	Week 15	Week 8
	<i>Fail to do so, you will get <b>TS (Tidak Selesai)</b> status which might cause an unsatisfactory result.</i>	

# 15.1 Others - FYP Documents

- Available in ULearn:
  - *FYP Implementation Guidance (Panduan Pelaksanaan PSM)*
    - Complete info about FYP execution for committee, supervisors and students.
  - *FYP Writing Guidance (Panduan Penulisan PSM)*
    - Complete info about content of FYP report and formatting.
    - Refer to BITC & BITZ section (for guidance on FYP contents)
  - *Project Proposal Form*



# 15.2 Others – Things to do now

## ■ ULearn

- *Enroll BITU 3973 Final Year Project 1 (FYP1/PSM1) course page*
- *Get all documents related for BITC & BITZ:*
  - BITU 3973 → INFO FOR PSM 1 (SEM 2, 2021/2021)→ BITC & BITZ

The screenshot shows the ULearn LMS interface. At the top, the ULEARN logo is visible. Below it, the course title "BITU3973 PROJECT I (PSM 1)" is displayed. A breadcrumb trail indicates the path: Home / Faculty of Information and Communication Technology / PSM, PD AND LI / BITU3973 (PSM 1). On the left, a "Navigation" menu lists various options: Home, Dashboard, Site pages, Current course, and BITU3973 (PSM 1) (which is expanded to show sub-items like Participants, Badges, General, EVALUATION & FEEDBACK, TEACHING PLAN, GUIDELINES, Forms, e-Repository, JADUAL PEMBENTANGAN, and INFO FOR PSM 1 (SEM 2, 2018/2019)). The main content area on the right features an "Announcements" section and a "Blended Learning Guide (Please Hide)" section. This guide lists requirements for the course: Teaching plan (minimum 1), Resources (minimum 7), Activity (minimum 3, with proof of student participation), and Assessment (minimum 2, with proof of student attempt). Each requirement is accompanied by a list of acceptable formats or actions, such as "Teaching Plan (RESOURCES -> File)", "Book / File (ie: ppt slides) / Page / URL", "Chat/Feedback/Forum/Glossary/Wiki", and "Assessment / Quiz".

## 15.4 Others– FYP Committee

- Any queries/further info, please refer to:
  - *FYP Committee, BITC*
    - Dr Norharyati binti Harum:  
[norharyati@utem.edu.my](mailto:norharyati@utem.edu.my)
  - *FYP Committee, BITZ*
    - Dr Nur Fadzilah binti Othman:  
[fadzilah.othman@utem.edu.my](mailto:fadzilah.othman@utem.edu.my)
  - *Your supervisor*

# References

- Buku Panduan Akademik FTMK
- Format Panduan Penulisan Laporan Projek Sarjana Muda FTMK
- ULearn



**Q & A**

