UMS
UNIVERSITI MALAYSIA SABAH

FAKULTI KOMPUTERAN & INFORMATIK
Faculty of Computing and Informatics

FCI HANDBOOK

2024

Faculty of Computing and Informatics,
Level 5, Universiti Malaysia Sabah
Labuan International Campus,
Jalan Sungai Pagar,
87000 Federal Territory of Labuan

+6087-503131 - Labuan Campus

+6088-329720 - KK Campus

pejfki[@]ums.edu.my

+60 87 503 114

ABOUT US

INTRODUCTION

Faculty of Computing and Informatics (FCI) was formerly known as Labuan School of Informatics Science (LSIS) and established in May 1999 offering programmes in the field of Information Technology, which is characterised as 'soft science' and oriented towards the business environment. In October 2003 Universiti Malaysia Sabah was recognized by Multimedia Development Corporation (MDeC) for ICT and ICT-facilitated businesses that develop or use multimedia technologies to produce and enhance their products and services (quality graduates).

Originally, LSIS offered two programmes during its establishment, however on the 1st of June 2014, LSIS was transformed into faculty and renamed Faculty of Computing and Informatics (FCI). Two programmes from School of Engineering and Information Technology (SEIT) were incorporated under FCI, in addition with one new programme offered in 2019/2020 academic session. This increases the programmes offered under FCI to five, namely:

1. Bachelor of Information Technology with Honours (Multimedia Technology)
2. Bachelor of Information Technology with Honours (Business Computing)
3. Bachelor of Computer Science with Honours (Software Engineering)
4. Bachelor of Computer Science with Honours (Network Engineering)
5. Bachelor of Computer Science with Honours (Data Science)

FCI also offering Postgraduate Programme in advancing technical knowledge, skills and professional competencies in an area of Computer Science & Information Technology.

1. Doctor of Philosophy in Computer Science
2. Doctor of Philosophy in Information Technology
3. Master of Science (Computer Science) [By Research]
4. Master of Science (Information Technology) [By Research]
5. Master of Computer Science (Computational Intelligence) [By Coursework]
6. Master of Computer Science (Software Development) [By Coursework]
7. Master of Information Systems [By Mixed Mode]

The growth of Information Technology and Computing has been tremendous and regarded as a pivotal element within everyday activities. Therefore the mastery of ICT knowledge produced through the advanced merger of Information Technology and Communications Technology will lead to the realisation of a borderless world, where knowledge and information delivery is not shackled by time and physical limitations. Thus, the completion of work can be achieved proficiently and dynamically.

ABOUT US

Our Mission

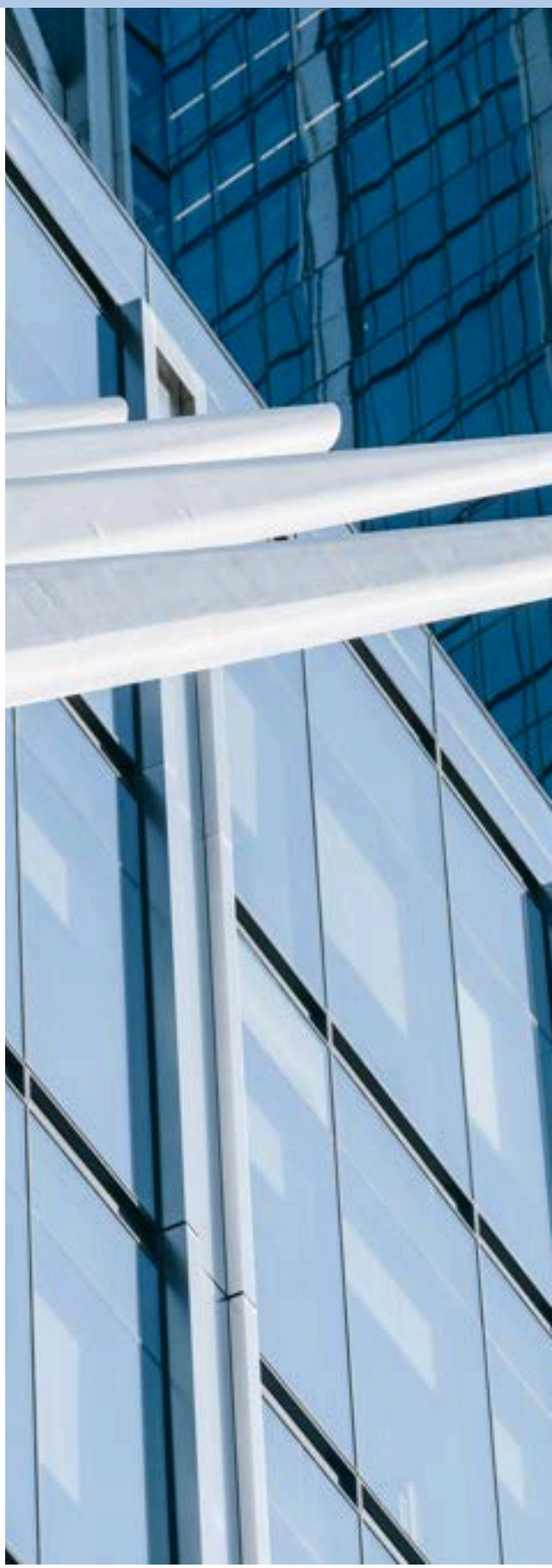
The Faculty of Computing and Informatics is determined to be the centre of excellence in innovative and creative information technology towards achieving global standards

Our Vision

Faculty of Computing and Informatics strives in achieving scholarly excellence in the field of Information Technology and attain international recognition through its teaching, learning, research, publication, social contribution and balance of specialised knowledge

Our Objectives

- To produce quality graduates in computing and informatics with sustainable academic programs.
- To increase the number of graduates with professional skill certification.
- To strive for the visibility of the faculty through high impact research and publication.
- To establish professional relationship with the industries and public sectors in computing and informatics through innovation, collaboration and consultancy.



ABOUT US

OJECTIVES

MALAYSIA EDUCATION BLUEPRINT (HIGHER LEARNING) 2015-2025

To achieve these system and student aspirations, the MEB (HE) outlines 10 Shifts that will spur continued excellence in the higher education system. All 10 Shifts address key performance issues in the system, particularly with regard to quality and efficiency, as well as global trends that are disrupting the higher education landscape.

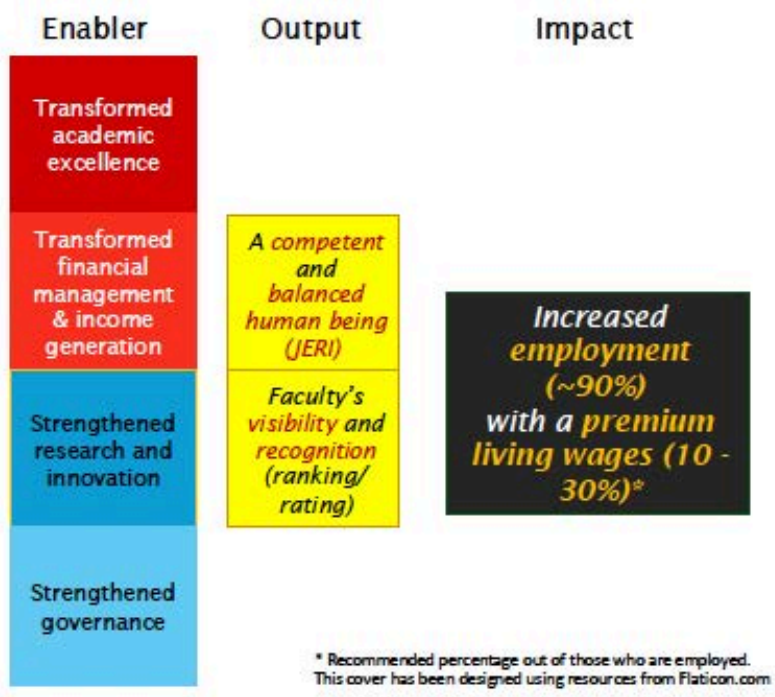
The first four Shifts focus on outcomes for key stakeholders in the higher eduation system, including students in academic and TVET pathways, the academic community, as well as all Malaysians participating in lifelong learning. The other six Shifts focus on enablers for the higher education ecosystem, covering critical components such as funding, governance, innovation, internationalisation, online learning, and delivery.

UMS STRATEGIC PLAN 2023-2027

UMS
UNIVERSITI MALAYSIA SABAH

- KRA 1 — Global Recognition (TNCAA)
- KRA 2 — World-Class Academic Programs (TNCAA)
- KRA 3 — Translatable Research (TNCPI)
- KRA 4 — Student Development & Satisfaction (TNCHEPA)
- KRA 5 — Financial Sustainability (Bursar)
- KRA 6 — Empowerment of Governance, Human Resources & Delivery System (Registrar)
- KRA 7 — Digital Transformation (CDO)
- KRA 8 — Government, Industry & Community Engagement (PNC)
- KRA 9 — Green Campus (Ecocampus)
- KRA 10 — Clinical Services & Research (HUMS)

FCI KEY RESULT AREA (FCI KRA)



HUMAN RESOURCE SUMMARY

ACADEMIC POST

Statistic according to designation

DESIGNATION	TOTAL	REMARKS		
ACADEMIC POST		PERMANENT	CONTRACT	TEMPORARY
Professor (VK7)	3	3	0	-
Associate Professor (Ds54/DS53)	9	9	0	-
Senior Lecturer (DS51/DS52)	31	24	7	-
Lecturer (DS45)	11	11	0	-
Graduate Fellow	1			1
TOTAL	55	52 Active, 3-study Leave		

Statistic according to programme

POSITION	UH6481001	UH6481002	UH6481003	UH6481004	UH6481005	GF	TOTAL
Professor (VK7)	1	-	-	-	2	-	3
Associate Professor (DS53/DS54)	2	1	1	2	2	-	8
Senior Lecturer (DS51/DS52	10	6	5	6	6	-	33
Lecturer (DS45)	-	-	3	5	-	-	8
Graduate Fellow	-	-	-	-	-	1	1
TOTAL	13	7	9	13	10	1	53

HUMAN RESOURCE SUMMARY

ADMINISTRATIVE POST

	PERMANENT	CONTRACT	TOTALS
Senior Deputy Registrar (N52)	1	-	1
Senior IT Officer (F44)	1	-	1
Assistant Registrar (N41)	1	-	1
Senior Assistant Administrative Officer (N32)	2	-	2
Senior Office Secretary(N32)	1	-	1
Assistant Science Officer (C29)	2	-	2
Senior Administrative Assistant (N22)	3	-	3
Senior Computer Technician (FT22)	1	-	1
Administrative Assistant (N19)	2	1	3
Computer Technician (FT19)	2	-	2
Senior General Administrative Assistant (N14)	1	=	1
General Administrative Assistant (N11)	1	-	1

Total 19 | 18 Permanent, 1 Contract

FCI Academic to Non-academic Ratio, 2.7:1

UMS PRINCIPAL OFFICER

PROFESSOR DATUK DR. KASIM HJ. MANSOR

Vice-Chancellor

Tel : 088-320000 ext. 100342

e-mail : pavcums@ums.edu.my

PROFESSOR DR. SHAHRIL BIN YUSOF

Deputy Vice-Chancellor (Academic and International)

Tel : 088-320000 ext. 100037

e-mail : patnca@ums.edu.my

PROFESSOR IR. DR. ROSALAM HJ. SARBATLY

Deputy Vice-Chancellor (Research and Innovation)

Tel : 088-320000 ext. 101022

e-mail : patncpp@ums.edu.my

ASSOC. PROFESSOR DR. RAMAN B. NOORDIN

Deputy Vice-Chancellor (Student Affairs and Alumni)

Tel : 088-320000 ext. 100360

e-mail : patnchep@ums.edu.my

UMS PRICIPAL OFFICER

LUQMAN RIDHA ANWAR

Registrar

Tel : 088-320000

e-mail : papenums@ums.edu.my

BADRUL HISHAM BIN ISMAIL

Bursar

Tel : 088-320000 ext. 200500/20

e-mail : pabenums@ums.edu.my

MD SAZALI MD SALLEH

Chief Librarian

Tel : 088-320000

e-mail : palibrary@ums.edu.my

AWANG SUHAIZAM BUNGSO

Legal Advisor

Tel : 088-320000 ext. 200052

e-mail : ppuu@ums.edu.my

ADMINISTRATIVE OFFICER

Meet OUR TEAM

ASSOCIATE PROFESSOR TS. DR. MOHD HANAFI AHMAD HIJAZI

Dean

Tel : 088-320000 ext. 100818
e-mail : hanafi@ums.edu.my

ASSOCIATE PROFESSOR TS. DR. LEAU YU BENG

Deputy Dean(Academic & Student Affairs)

Tel : 088-320000 ext. 101242
e-mail : lybeng@ums.edu.my

DR. NOORALISA MOHD TUAH

Deputy Dean (Postgraduate & International)

Tel : 087-503000 ext. 101495
e-mail : alisa.tuah@ums.edu.my

TS. DR. NORAZLINA BINTI KHAMIS

Deputy Dean (Research & Innovation)

Tel : 088-320000 ext. 103606
e-mail : norazlina@ums.edu.my

Meet OUR TEAM

ADMINISTRATIVE OFFICER

MOLLY DONNA AWANG SHAM

Senior Deputy Registrar

Tel : 088-320000 ext. 102599
e-mail : molly@ums.edu.my

MOHD FADZLI BIN SARUDI

Assistant Registrar

Tel : 087-503000 ext. 102888
e-mail : fadzli86@ums.edu.my

MOHD NAZRI BIN SUIN

Senior IT Officer

Tel : 087-320000 ext. 101634
e-mail : nazri@ums.edu.my

Meet the Team
(Labuan Campus)

ROSLINAHWATI BINTI ABDUL RAJAK

Senior Assistant Administrative Officer (N32)

087-503000 ext. 101303
ros@ums.edu.my

FARIDAH BINTI ADAM

Senior Personal Assistant (N32)

087-503000 ext. 100697
pejfki@ums.edu.my

AG. SUHAIZAN BIN AWANG SUANG

Senior Administrative Assistant (N22)

087-503000 ext. 00659
aghaizan@ums.edu.my

MOHD AZLAN BIN GANI

Senior Administrative Assistant (N22)

087-503000 ext. 101670
mdazlan@ums.edu.my

EZY @ NOROL ATIKAH BINTI SABTU

Senior Computer Technician (FT22)

087-503000 ext. 100690
ezy@ums.edu.my

JUNAINAH BINTI YUNUS

Administrative Assistant (N19)

087-503000 ext. 102614
jun@ums.edu.my

Meet the Team
(Labuan Campus)

DAYANGKU SYAFIQAH BINTI PG ANAK

Administrative Assistant (N19)

087-503000 ext. 103584

dk.syafiqah@ums.edu.my

NORZAN RANTIE

Senior General Administrative Assistant (N14)

087-503000 ext. 102710

norzan@ums.edu.my

Meet the Team
(Kota Kinabalu Campus)

JUNAIDAH BT. LAMJAN

Senior Assistant Administrative Officer (N32)

088-320000 ext. 101159
june4g@ums.edu.my

DIANA BINTIFF KIMMUAN

Senior Science O i er (C29)

088-320000 ext. 101043
diane@ums.edu.my

SAIDIN BIN AHMAD

Senior Science Officer (C29)

088-320000 ext. 101150
saidin@ums.edu.my

LEOPOLD MODIES FALIX

Senior Administrative Assistant (N22)

088-320000 ext. 101859
leomf@ums.edu.my

RESTI BINTI YUASRI

Administrative Assistant (N19)

088-320000 ext. 103727
resti@ums.edu.my

FADZLI BIN BAHAL

Computer Technician (FT19)

088-320000 ext. 102298
fadili85@ums.edu.my

Meet the Team
(Kota Kinabalu Campus)

ALBERT ALEX JIMMY

Computer Technician (FT19)

088-320000 ext. 102293

albert@ums.edu.my

MOHD FAIZAL BIN MAD NASI

General Administrative Assistant (N11)

088-320000 ext. 103325

ejal86@ums.edu.my

GARIS PANDUAN KEURUSETIAAN MESYUARAT UTAMA
FAKULTI KOMPUTERAN DAN INFORMATIK, UNIVERSITI MALAYSIA SABAH

GARIS PANDUAN KEURUSETIAAN MESYUARAT UTAMA

FAKULTI KOMPUTERAN DAN INFORMATIK, UNIVERSITI MALAYSIA SABAH

1.0 TUJUAN

Garis Panduan ini diwujudkan bagi memastikan penyelarasan dan pelaksanaan Mesyuarat utama di fakulti dilaksanakan dengan betul dan memenuhi tatacara berkaitan yang termaktub dalam mana-mana Akta, Perlembagaan, Statut, Garis Panduan, Terma Rujukan, dan Tatacara yang terdapat di universiti.

2.0 LATAR BELAKANG

2.1 Garis panduan ini diwujudkan berpandukan rujukan seperti berikut:-

(i) Pekeliling Pendaftar Bilangan 2 Tahun 2021: Pindaan Format Agenda Mesyuarat Senat dan Terma Rujukan Mesyuarat Senat UMS (Keluaran ke 2) (Pindaan berkuat kuasa pada 31 Mac 2021).

(ii) Perlembagaan Universiti Malaysia Sabah, Peraturan NO 1 Peraturan UMS (Peraturan-peraturan Mesyuarat Senat) 1998.

(iii) Pekeliling Pendaftar Garis Panduan Keurusetiaan Mesyuarat Utama Fakulti, Pusat dan Institut di UMS Bil 3/2017.

2.2 Garis panduan ini adalah rujukan kepada semua keurusetiaan Mesyuarat utama di Fakulti Komputeran dan Informatik.

3.0 TERMA RUJUKAN MESYUARAT UTAMA FAKULTI KOMPUTERAN DAN INFORMATIK

3.1 Jawatankuasa Eksekutif dan Kewangan FKI

Bil	Perkara		Butiran
1.	**Keahlian**	**Pengerusi**	Dekan
		Pengerusi Ganti	Tiada
		Ahli	1. Timbalan Dekan (Akademik & HEPA) 2. Timbalan Dekan (Pascasiswazah & Antarabangsa) 3. Timbalan Dekan (Penyelidikan & Inovasi) 4. Ketua Program Kejuruteraan Perisian 5. Ketua Program Kejuruteraan Rangkaian 6. Ketua Program Teknologi Multimedia 7. Ketua Program Komputeran Perniagaan 8. Ketua Program Sains Data 9. Ketua Pusat Penyelidikan di FKI 10. Timbalan Pendaftar 11. Penolong Pendaftar 12. Pegawai Teknologi Maklumat
		Tempoh Lantikan	-
		Setiausaha	1. Ketua Pentadbiran Fakulti / Setiausaha Pejabat (PA)
		Urus Setia	Bahagian/ Sektor Pentadbiran dan Kewangan Fakulti
2.	**Kuorum**		Dua per tiga (2/3)
3.	**Kekerapan**		12 kali setahun
	Agenda		1. Pelan Strategik Fakulti 2. Hal Ehwal Pengurusan/Pentadbiran dan Kewangan 3. Hal Ehwal Akademik & Pelajar 4. Hal Ehwal Pascasiswazah dan Antarabangsa 5. Hal Ehwal Penyelidikan & Inovasi 6. Hal Ehwal Hubungan dan Kerjasama Fakulti 7. Hal Ehwal Pembangunan, Fasiliti dan ICT 8. Hal-hal lain
4.	**Fungsi dan Kuasa**		Mesyuarat ini bertanggungjawab kepada Dekan selaku Ketua Jabatan dalam hal ehwal penyelarasan dan pengurusan pentadbiran keseluruhan portfolio fakulti. Antara fungsi dan bidang kuasa jawatankuasa ini ialah: **MENYOKONG** 1. Cadangan mengadakan Memorandum Persefahaman (MoU) di antara Fakulti Komputeran dan Informatik (FKI) dan Agensi Luar.

		2. Cadangan mengadakan Memorandum Perjanjian (MoA) di antara Fakulti Komputeran dan Informatik (FKI) dan Agensi Luar. 3. Cadangan Penyambungan Memorandum Persefahaman (MoU) di antara Fakulti Komputeran dan Informatik (FKI) dan Agensi Luar. 4. Cadangan Penyambungan Memorandum Perjanjian (MoA) di antara Fakulti Komputeran dan Informatik (FKI) dan Agensi Luar. 5. Penubuhan Kursi di bawah Fakulti 6. Memorandum Perjanjian Penyelidikan **MELAPORKAN** 1. Hal ehwal pentadbiran fakulti yang tidak bertentangan dengan kuasa yang diberikan oleh Akta, Perlembagaan, Statut, Kaedah dan Peraturan Universiti; 2. Megurus dan memantau aktiviti utama dan Pelan Strategik masing-masing seperti Pengurusan Pentadbiran Am, Akademik dan HEPA, Penyelidikan, Pembangunan, Pascasiswazah, Antarabangsa; 3. Memperakukan perncapaian KRA yang melibatkan fakulti dan Pelan Strategik UMS; 4. JKKP **MEMPERAKUKAN** 1. Cadangan pelantikan baharu /penyambungan: a. Profesor Adjung b. Penilai Luar c. Profesor Pelawat d. Prof. Madya Pelawat e. Pensyarah Pelawat f. Lain-lain pelantikan khas yang memerlukan kelulusan Senat **MELULUSKAN** 1. Meluluskan Dasar baru melibatkan Pentadbiran Governan, Kewangan (penjaan pendapatan), Sumber Manusia, Akademik & Hal Ehwal Pelajar, Pascasiswazah, P&I, Pelan Strategik, dan isu-isu semasa di Fakulti; 2. Membincangkan/memperaku/meluluskan perkara-perkara yang berkaitan dengan pengurusan dan pentadbiran dan fakulti secara keseluruhannya;

		3. Perancangan perbelanjaan perkara berkaitan kewangan sama ada belanja mengurus, tabung amanah dan mana-mana punca kewangan yang dimiliki oleh fakulti; 4. Perancangan One-off fakulti 5. Perbelanjaan Tabung Amanah Penjanaan Fakulti dan lain-lain tabung amanah di bawah fakulti. 6. Perancangan KRA yang melibatkan fakulti dan Pelan Strategik UMS. 7. Perancangan hal ehwal kolaborasi dan kerjasama fakulti bersama industri. 8. Permohonan Letter of Intent FKI. 9. Pelaksanaan pembangunan, fasiliti dan ICT
5.	**Rujukan**	1. Pekeliling Pendaftar Garis Panduan Keurusetiaan Mesyuarat Utama Fakulti, Pusat dan Institut di UMS Bil 3/2017.

3.2 Mesyuarat Fakulti

Bil	Perkara		Butiran
1.	**Keahlian**	**Pengerusi**	Dekan
		Pengerusi Ganti	Tiada
		Ahli	1. Semua pensyarah dan wakil kakitangan pentadbiran yang aktif di FKI (Labuan & KK)
		Tempoh Lantikan	-
		Setiausaha	1. Ketua Pentadbiran / Setiausaha Pejabat (PA)
		Urus setia	Bahagian/ Seksyen Pentadbiran Fakulti
2.	**Kuorum**		Dua per tiga (2/3)
3.	**Kekerapan**		6 kali setahun
4.	**Agenda**		1. Pelan Strategik Fakulti 2. Hal Ehwal Pengurusan/Pentadbiran 3. Hal Ehwal Akademik & Pelajar 4. Hal Ehwal Pascasiswazah dan Antarabangsa 5. Hal Ehwal Penyelidikan & Inovasi 6. Hal Ehwal Hubungan dan Kerjasama Fakulti 7. Hal Ehwal Pembangunan, Fasiliti dan ICT 8. Hal Ehwal Pelantikan Akademik 9. Hal Ehwal Pembangunan dan Kualiti Akademik 10. Hal-hal lain
5	**Fungsi dan kuasa**		Mesyuarat ini bertanggungjawab kepada Dekan selaku Ketua Jabatan dan Senat dalam hal ehwal penyelarasan dan pengurusan pentadbiran keseluruhan fakulti. Antara fungsi dan bidang kuasa jawatankuasa ini ialah: **MELAPORKAN** 1. Melaporkan keputusan hal ehwal berkaitan daripada mesyuarat :- a. Jawatankuasa Eksekutif & Kewangan FKI; b. Jawatankuasa Akademik FKI c. Jawatankuasa Hal Ehwal Pelajar & Alumni FKI d. Jawatankuasa Kebajikan Pelajar FKI e. Jawatankuasa Kualiti Akademik & Akreditasi FKI f. Minit Mesyuarat Program di FKI 2. Hal ehwal berkaitan dasar melibatkan pentadbiran governan, Sumber Manusia, Akademik & Hal Ehwal Pelajar dan Alumni, Pascasiswazah & Antarabangsa, P&I, Pelan Strategik, dan isu-isu semasa di Fakulti.

		3. Hal ehwal aktiviti fakulti dan aktiviti jawatankuasa yang ditubuhkan di fakulti; 4. Hal ehwal kelulusan mesyuarat utama universiti seperti JPU, Senat, LPU dan lain-lain. **MELULUSKAN** 1. Dasar baru melibatkan akademik, HEPA, pascasiswazah, antarabangsa, P&I, dan isu2 semasa.

3.3 Jawatankuasa Akademik FKI

Bil	Perkara		Butiran
1.	**Keahlian**	**Pengerusi**	Dekan
		Pengerusi Ganti	Timbalan Dekan Akademik & HEPA; atau Mana-mana ahli yang dilantik oleh Dekan untuk mempengerusikan mesyuarat, dalam ketiadaan Dekan.
		Ahli	1. Timbalan Dekan (Akademik & HEP) 2. Ketua Program Kejuruteraan Perisian 3. Ketua Program Kejuruteraan Rangkaian 4. Ketua Program Teknologi Multimedia 5. Ketua Program Komputeran Perniagaan 6. Ketua Program Sains Data 7. Penyelaras PLUMS 8. Penyelaras Projek Akhir Kejuruteraan Perisian 9. Penyelaras Projek Akhir Kejuruteraan Rangkaian 10. Penyelaras Projek Akhir Teknologi Multimedia 11. Penyelaras Projek Akhir Komputeran Perniagaan 12. Penyelaras Projek Akhir Sains Data
		Tempoh Lantikan	-
		Setiausaha	1. Penolong Pendaftar (Seksyen Akademik & HEP) 2. Pegawai Tadbir/ Penolong Pegawai Tadbir dalam ketiadaan Setiausaha 1
		Urus setia	Seksyen Akademik & HEP
2.	**Kuorum**		Dua per tiga (2/3)
3.	**Kekerapan**		12 kali setahun

4.	**Fungsi dan kuasa**	Jawatankuasa ini bertanggungjawab kepada Jawatankuasa Prasiswazah, Diploma dan Asasi dan Senat dalam hal ehwal akademik pengajian Prasiswazah, Diploma dan Asasi. Antara fungsi dan bidang kuasa jawatankuasa ini ialah: **MELAPORKAN** 1. Kelulusan mana-mana permohonan 2. Pelajar berdasarkan kuasa yang diberikan oleh Senat seperti yang dinyatakan dalam Kedah-Kaedah Prasiswzah UMS. 3. Kepada Senat/Jawatankuasa Tetap Senat semua perkara berkaitan dengan hal ehwal akademik di fakulti. 4. Pencapaian akademik dan prestasi serta keputusan peperiksaan pelajar fakulti kepada Senat/Jawatankuasa Tetap Senat. 5. Menimbang kemajuan dan kelakuan pelajar di fakulti dan melaporkan kepada Senat/Jawatankuasa Tetap Senat; **MEMPERAKUKAN** 1. Kepada Senat/Jawatankuasa Tetap Senat untuk pengiktirafan ijazah, diploma dan sijil dan kepujian akademik lain yang dianugerahkan kepada sesiapa yang layak. 2. Cadangan perubahan syarat kemasukan 3. Program Diploma dan Ijazah Sarjana Muda; 4. Memperakukan syarat-syarat kemasukan /kelayakan program Diploma dan Ijazah Sarjana Muda. 5. Penilaian dan memperakukan kepada Senat/Jawatankuasa Tetap Senat terhadap pemeriksa-pemeriksa luar yang difikirkan sesuai dan bermanfaat; 6. Melaporkan dan memperakukan pengurusan dan perancangan Program Mobiliti Inbound dan Outbound Kebangsaan dan Antarabangsa. **MELULUSKAN** Melaksanakan mana-mana kuasa dan fungsi yang lain sebagaimana yang boleh dan diwakili kepadanya oleh Senat atau yang diperuntukkan di bawah peruntukan mana-mana status, Akta dan Peraturan Universiti.
5.	**Rujukan**	Pindaan Format Agenda Mesyuarat Senat Mengikut Sidang

		Dan Terma Rujukan Mesyuarat Senat Universiti Malaysia Sabah (Keluaran Ke-2) (Pindaan Berkuatkuasa Pada 31 Mac 2021) (Peraturan-Peraturan Mesyuarat Senat) 1998 Kaedah Pengajian Prasiswazah Universiti Malaysia Sabah 2014 (Pindaan Tahun 2021)

3.4 Jawatankuasa Hal Ehwal Pelajar dan Alumni FKI

Bil	Perkara		Butiran
1.	**Keahlian**	**Pengerusi**	Timbalan Dekan Akademik & HEPA
		Pengerusi Ganti	Penyelaras HEP; atau Mana-mana ahli yang dilantik oleh Timbalan Dekan untuk mempengerusikan mesyuarat, dalam ketiadaan Timbalan Dekan Akademik & HEPA.
		Ahli	1. Penyelaras Hal Ehwal Pelajar (HEP) 2. Penyelaras Kerjaya 3. Penyelaras Keusahawanan 4. Penyelaras Latihan Industri W.P. Labuan 5. Penyelaras Latihan Industri Kota Kinabalu 6. Penyelaras Alumni W.P. Labuan 7. Penyelaras Alumni Kota Kinabalu 8. Presiden PMFKI W.P. Labuan 9. Presiden PMFKI Kota Kinabalu 10. Wakil pelajar Pascasiswazah FKI
		Tempoh Lantikan	-
		Setiausaha	1. Penolong Pendaftar (Seksyen Akademik & HEP) 2. Penolong Pegawai Tadbir dalam ketiadaan Setiausaha 1
		Urus setia	Seksyen Akademik & HEP
2.	**Kuorum**		Dua per tiga (2/3)
3.	**Kekerapan**		6 hingga 12 kali setahun
4.	**Fungsi & Kuasa**		Jawatankuasa ini bertanggungjawab kepada Jawatankuasa Eksekutif & Kewangan FKI dalam aktiviti dan hal ehwal pelajar. Antara fungsi dan bidang kuasa jawatankuasa ini ialah: **MELAPORKAN** 1. Status Latihan Industri Pelajar 2. Status program mentor mentee 3. Perancangan dan pengurusan keusahawanan 4. Perancangan dan pengurusan Kerjaya 5. Perancangan dan pengurusan Alumni 6. Perancangan dan pengurusan aktiviti PMFKI

		7. Hasil perbincangan isu *Graduate Employability (GE)* 8. Status akaun amanah di bawah pengawasan TD HEPA **MEMPERAKUKAN** 1. Hal ehwal pengurusan kebajikan pelajar
5.	**Rujukan**	Pindaan Format Agenda Mesyuarat Senat Mengikut Sidang Dan Terma Rujukan Mesyuarat Senat Universiti Malaysia Sabah (Keluaran Ke-2) (Pindaan Berkuatkuasa Pada 31 Mac 2021) (Peraturan-Peraturan Mesyuarat Senat) 1998

3.5 Mesyuarat Pengurusan Fakulti bersama Persatuan Mahasiswa FKI

Bil	Perkara		Butiran
1.	**Keahlian**	**Pengerusi**	Dekan
		Pengerusi Ganti	Timbalan Dekan Akademik & HEPA; atau Mana-mana ahli yang dilantik oleh Dekan untuk mempengerusikan mesyuarat, dalam ketiadaan Dekan.
		Ahli	1. Timbalan Dekan Akademik & HEPA 2. Penyelaras Hal Ehwal Pelajar (HEP) 3. Ketua Pentadbiran FKI 4. Pegawai Teknologi Maklumat Kanan 5. Presiden PMFKI W.P. Labuan 6. Presiden PMFKI Kota Kinabalu 7. Timbalan Presiden PMFKI W.P. Labuan 8. Timbalan Presiden PMFKI Kota Kinabalu 9. Setiausaha PMFKI W.P. Labuan 10. Setiausaha PMFKI Kota Kinabalu 11. Bendahari PMFKI W.P. Labuan 12. Bendahari PMFKI Kota Kinabalu 13. Wakil Pelajar Pascasiswazah FKI
		Tempoh Lantikan	-
		Setiausaha	1. Penolong Pendaftar (Seksyen Akademik & HEP) 2. Penolong Pegawai Tadbir dalam ketiadaan Setiausaha I
		Urus setia	Seksyen Akademik & HEP
2.	**Kuorum**		Dua per tiga (2/3)
3.	**Kekerapan**		Sekurang-kurangnya 2 kali setahun
4.	**Fungsi & Kuasa**		Mesyuarat ini bertanggungjawab kepada Dekan selaku Ketua Jabatan berkenaan aktiviti dan hal

		ehwal pelajar. Antara fungsi dan bidang kuasa jawatankuasa ini ialah: **MELAPORKAN** 1. Maklumbalas daripada pelajar berkaitan isu Kebajikan 2. Maklumbalas daripada pelajar berkaitan isu Pengajaran dan Pembelajaran 3. Maklumbalas daripada pelajar berkaitan isu Fasiliti dan Infrastruktur 4. Penglibatan pelajar bersama industri dan masyarakat 5. Penglibatan pelajar dalam aktiviti kemahasiswaan
5.	**Rujukan**	Panduan Penubuhan Badan Pelajar Universiti Malaysia Sabah

3.6 Jawatankuasa Kualiti Akademik & Akreditasi FKI

Bil	Perkara		Butiran
1.	**Keahlian**	**Pengerusi**	Dekan
		Pengerusi Ganti	Penyelaras Kualiti Akademik; atau Mana-mana ahli yang dilantik oleh Dekan untuk mempengerusikan mesyuarat, dalam ketiadaan Dekan.
		Ahli	1. Penyelaras Kualiti Akademik 2. Ketua Program Kejuruteraan Perisian 3. Ketua Program Kejuruteraan Rangkaian 4. Ketua Program Teknologi Multimedia 5. Ketua Program Komputeran Perniagaan 6. Ketua Program Sains Data 7. Ketua Program MCSSD 8. Ketua Program MCSSI 9. Penyelaras Pascasiswazah 10. Penyelaras PLUMS (Prasiswazah) 11. Penyelaras PLUMS (Pascasiswazah) 12. Juru Audit dalaman Fakulti
		Tempoh Lantikan	-
		Setiausaha	1. Penolong Pendaftar 2. Pegawai Tadbir/ Penolong Pegawai Tadbir dalam ketiadaan Setiausaha I
		Urus setia	Seksyen Akademik (Prasiswazah & Pascasiswazah)
2.	**Kuorum**		Dua per tiga (2/3)

3.	**Kekerapan**	4 kali setahun
4.	**Fungsi & Kuasa**	Mesyuarat ini bertanggungjawab kepada JK Pembangunan Akademik & Senat dalam hal ehwal akademik berkaitan dengan pembangunan Akademik. Antara fungsi dan bidang kuasa jawatankuasa ini ialah: **MELAPORKAN** 1. Cadangan penyelaras pengurusan Audit Dalam dan Luar berkaitan program Akademik 2. Pemantauan atau pelaporan pencapaian PEO, PLO, dan CLO kursus setiap program 3. Pemantau penilaian dan status akreditasi program 4. Pantauan dan menyelaras penambahbaikan program akademik **MEMPERAKUKAN** 1. Cadangan perubahan Nama dan Kod Kursus. 2. Perubahan kandungan dan/atau Jam Kredit sedia ada. 3. Menyemak dan mengesahkan kurikulum program prasiswazah dan pascasiswazah yang telah disediakan oleh program sebelum dibawa kepada Pusat Pembangunan Kecemerlangan Akademik (PPKA) untuk pengesahan; **MENYOKONG** 1. Pembangunan Program Akademik Baharu. 2. Semakan Kurikulum/Struktur/Nama Program. 3. Mengurus permohonan dan dokumentasi bagi perakuan akreditasi MQA dan Badan Profesional berkaitan.
5.	**Rujukan**	Pindaan Format Agenda Mesyuarat Senat Mengikut Sidang Dan Terma Rujukan Mesyuarat Senat Universiti Malaysia Sabah (Keluaran Ke-2) (Pindaan Berkuatkuasa Pada 31 Mac 2021) (Peraturan-Peraturan Mesyuarat Senat) 1998 Kaedah Pengajian Prasiswazah Universiti Malaysia Sabah 2014 (Pindaan Tahun 2021) Manual Kualiti MS ISO 9001:2015 Universiti Malaysia Sabah. Akta MQA

		Code of Practice for Programme Accreditation (COPPA) Standards dan Programme Standards yang dikeluarkan oleh MQA. Kerangka Kelayakan Malaysia (MQF). Pekeliling dan Garis Panduan MQA yang berkaitan Pekeliling dan Garis Panduan JPT yang berkaitan Programme Standards yang dikeluarkan oleh Majlis Akreditasi Badan Profesional (untuk program yang berkenaan)

3.7 Jawatankuasa Penyelidikan & Inovasi

Bil	Perkara		Butiran
1.	**Keahlian**	**Pengerusi**	Dekan
		Pengerusi Ganti	Timbalan Dekan (Penyelidikan & Inovasi); atau Mana-mana ahli yang dilantik oleh Dekan untuk mempengerusikan mesyuarat, dalam ketiadaan Dekan.
		Ahli	1. Timbalan Dekan (Penyelidikan & Inovasi) 2. Pengarah Pusat Penyelidikan FKI 3. Ketua Kumpulan (RG) dan Ketua Makmal Penyelidikan (RL) 4. Ketua *Task Force* MyRA 5. Ketua *Task Force* Inovasi dan Penjanaan 6. Ketua *Task Force* QS Ranking
		Tempoh Lantikan	-
		Setiausaha	Ketua Pentadbiran/Penolong Pendaftar (Seksyen Penyelidikan dan Inovasi) Pembantu Tadbir (Unit Penyelidikan & Inovasi) dalam ketiadaan Setiausaha I
		Urus setia	Seksyen Penyelidikan dan Inovasi
2.	**Kourum**		Dua per tiga (2/3)
3.	**Kekerapan**		6 kali setahun
4.	**Fungsi & Kuasa**		Hal Ehwal ini bertanggungjawab kepada Jawantankuasa Penyelidikan & Inovasi serta Senat berkaitan dengan pengurusan penyelidikan. Kertas kerja yang dikemukakan kepada Jawatankuasa Eksekutif FKI adalah seperti berikut: **MEMPERAKUKAN** 1. Permohonan geran penyelidikan dalam dan luar Fakulti; 2. Permohonan pelanjutan tempoh penyelidikan geran dalaman fakulti;

		3. Permohonan pascadoktoral fakulti; 4. SOP/Garis Panduan/Tatacara yang melibatkan proses an aktiviti penyelidikan & inovasi 5. Status geran tamat 6. Permohonan perjanjian penyelidikan **MELAPORKAN** 1. Status geran penyelidikan fakulti (dalam/luar/industri/antarabangsa); 2. 2. Pencapaian penerbitan fakulti; 3. 3. Pencapaian pengkomersialan dan inovasi; 4. 4. Perancangan dan memantau aktiviti berkaitan penyelidikan dan inovasi fakulti; 5. 5. Berkenaan penarafan dan penilaian berkaitan penyelidikan & inovasi fakulti; 6. Pencapaian KPI bagi kumpulan atau unit Penyelidikan; 7. Memperaku permohonan insentif penerbitan fakulti;
5.	**Rujukan**	

3.8 Jawatankuasa Pascasiswazah & Antarabangsa FKI

Bil	Perkara		Butiran
1.	**Keahlian**	**Pengerusi**	Dekan
		Pengerusi Ganti	Timbalan Dekan (Pascasiswazah & Antarabangsa); atau Mana-mana ahli yang dilantik oleh Dekan untuk mempengerusikan mesyuarat, dalam ketiadaan Dekan.
		Ahli	1. Timbalan Dekan (Pascasiswazah & Antarabangsa) 2. Tiga orang wakil Profesor/Profesor Madya 3. Dua orang wakil Pensyarah Kanan 4. Penyelaras Pascasiswazah 5. Ketua Program MCSSD 6. Ketua Program MCSSI 7. Penyelaras PLUMS
		Tempoh Lantikan	-
		Setiausaha	1. Ketua Pentadbiran/Penolong Pendaftar (Seksyen Pascasiswazah & Antarabangsa)

			2. Penolong Pendaftar (dalam ketiadaan Setiausaha 1)
		Urus setia	Seksyen Pascasiswazah & Antarabangsa
2.	**Kuorum**		Dua per tiga (2/3)
3.	**Kekerapan**		12 kali setahun
4.	**Fungsi & Kuasa**		Jawatankuasa ini bertanggungjawab kepada Jawatankuasa Pascasiswazah dan Senat dalam hal ehwal akademik pengajian pascasiswazah. Antara fungsi dan bidang kuasa jawatankuasa ini ialah: **MEMPERAKUKAN** 1. Permohonan pertukaran dan Penambahan Penyelia. 2. Permohonan pertukaran program pengajian. 3. Permohonan pertukaran Fakulti bidang pengajian. 4. Permohonan rayuan meneruskan pengajian. 5. Permohonan rayuan meneruskan Pengajian (Status Gagal dan Diberhentikan) dalam keputusan Akhir Semester, Sesi_____. 6. Cadangan Pemeriksa Luar dan Pemeriksa Dalam. (Notis Penyerahan Tesis) 7. Permohonan pertukaran taraf/program pengajian. 8. Gred keputusan peperiksaan secara kerja kursus Semester, Sesi_____. 9. Memperakukan calon-calon untuk kemasukan ke peringkat Sarjana dan PhD secara penyelidikan dan kerja kursus yang telah diluluskan oleh pihak program yang berkenaan; 10. Bidang Pengajian, Penyelia Utama dan Penyelia bersama yang disyorkan oleh ketua program yang bersesuaian; 11. Laporan kemajuan pelajar–pelajar peringkat Sarjana dan PhD sebelum dihantar kepada Dekan Pusat Pengajian Pascasiswazah, UMS; 12. Membuat promosi program PhD dan Sarjana dengan kerjasama Pusat Pengajian Pascasiswazah; 13. Merancang dan mempergiatkan kemasukan pelajar PhD dan Sarjana yang berkualiti dari dalam dan luar negara; 14. Pemantauan kualiti penyeliaan;

		15. Pemantauan prestasi akademik pelajar PhD dan Sarjana secara kerja kursus dan penyelidikan; **MELAPORKAN** 1. Status bilangan penetapan penyeliaan pelajar (mengikut jenis) kakitangan fakulti; 2. Cadangkan pelantikan panel penilai, pemeriksa dalam dan luar yang berkelayakan dan bersesuaian dengan bidang 3. Status laporan kemajuan prestasi (LKP) kakitangan akademik yang sedang melanjutkan pengajian di peringkat Doktor Falsafah. 4. Semua urusan hal ehwal jaringan industri antarabangsa berkaitan fakulti. 5. Aktiviti hubungan kerjasama yang melibatkan Mou/MoA. 6. CadanganTakwim Mesyuarat 7. Keputusan peperiksaan lisan (Viva Voce). **MELULUSKAN** 1. Melaksanakan mana-mana kuasa dan fungsi yang lain sebagaimana yang boleh dan diwakili kepadanya oleh Senat atau yang diperuntukkan dibawah peruntukan mana-mana status, Akta dan Peraturan Universiti.
5.	**Rujukan**	1. Kaedah Pengajian Pascasiswazah, UMS yang sedang berkuatkuasa. 2. Pekeliling-pekeliling Akademik; 3. Minit-Minit Mesyuarat Jawatankuasa Pengajian Pascasiswazah F/P/I. 4. Minit Mesyuarat Jawatankuasa Pengajian Pascasiswazah. 5. Minit-minit mesyuarat Senat. 6. Prospektus Pengajian Pascasiswazah, UMS. 7. Garis panduan yang dikeluarkan oleh MQA. 8. Dokumen-dokumen lain yang berkaitan dengan hal ehwal Pascasiswazah.

3.9 Mesyuarat Program FKI

Bil	Perkara		Butiran
1.	**Keahlian**	**Pengerusi**	Ketua Program
		Pengerusi Ganti	Mana-mana ahli program yang dilantik
		Ahli	Semua ahli/pensyarah program
		Tempoh Lantikan	-
		Setiausaha	Mana-mana ahli yang dilantik oleh Ketua Program
		Urus setia	Program
2.	**Kuorum**		Dua per tiga (2/3)
3.	**Kekerapan**		Sekurang-kurangnya 4 kali setahun
4.	**Fungsi dan Kuasa**		Jawatankuasa ini bertanggungjawab kepada Jawatankuasa Akademik FKI dan Jawatankuasa Eksekutif & Kewangan FKI dalam hal ehwal akademik pengajian Prasiswazah, Diploma dan Asasi. Antara fungsi dan bidang kuasa jawatankuasa ini ialah: **MEMPERAKUKAN** 1. Pemantauan Prestasi Akademik i. Meninjau pencapaian akademik pelajar, termasuk prestasi peperiksaan, kehadiran, dan sebarang isu yang berkaitan. ii. Membincangkan strategi untuk meningkatkan prestasi akademik pelajar yang menghadapi cabaran. iii. Melaporkan pelaksanaan, cabaran serta penyelesaian yang dicadangkan ke jawatankuasa akademik 2. Pemantauan Kebajikan dan Kesejahteraan Pelajar i. Meninjau statistik kecemasan, kesukaran pembelajaran, atau isu-isu kesejahteraan lain yang mungkin mempengaruhi prestasi pelajar ii. Membincangkan langkah-langkah pencegahan dan sokongan untuk pelajar yang mengalami masalah kesejahteraan iii. Melaporkan pelaksanaan, cabaran serta penyelesaian yang dicadangkan ke jawatankuasa akademik

		3. Penyelarasan dan Perkembangan Kurikulum i. Semakan kurikulum dan memastikan keserasian dengan standard MQA, akademik dan matlamat pembelajaran. ii. Membincangkan sebarang keperluan perubahan atau penambahbaikan kepada kurikulum dan table 4 iii. Melaporkan keputusan semakan, penyelarasan, cabaran serta penyelesaian yang dicadangkan ke jawatankuasa akademik dan kualiti 4. Pemantauan Pengajaran dan Pembelajran i. Memantau pelaksanaan pengajaran dan pembelajaran program untuk memastikan pencapaian matlamat dan tujuan program ii. Menerima dan meninjau maklum balas pelajar mengenai Pengajaran dan Pembelajran iii. Membincang sumber daya dan keperluan tambahan yang diperlukan untuk dibawa ke jawatankuasa akademik iv. Melaporkan cabaran pelaksanaan pengajaran dan pembelajaran serta penyelesaian yang dicadangkan ke jawatankuasa akademik. v. Moderasi kertas soalan peperiksaan. 5. Penglibatan Komuniti dan Industri i. Menilai tahap penglibatan komuniti dan industri dalam proses pengajaran dan pembelajaran dan bagaimana ia menyokong matlamat program ii. Membincangkan cara untuk memperkukuhkan hubungan dengan komuniti dan industri iii. Melaporkan pelaksanaan, cabaran dan penyelesaian yang dicadangkan ke jawatankuasa akademik 6. Pembangunan Profesional Pensyarah

		i. Menyemak strategi untuk meningkat pembangunan professional pensyarah ii. Membincangkan program Pembangunan Profesional Pensyarah yang diperlukan untuk meningkatkan prestasi akademik dan Pengajaran dan Pembelajran. iii. Melaporkan cabaran dan penyelesaian yang dicadangkan ke jawatankuasa akademik
5.	**Rujukan**	Pindaan Format Agenda Mesyuarat Senat Mengikut Sidang Dan Terma Rujukan Mesyuarat Senat Universiti Malaysia Sabah (Keluaran Ke-2) (Pindaan Berkuatkuasa Pada 31 Mac 2021) (Peraturan-Peraturan Mesyuarat Senat) 1998 Kaedah Pengajian Prasiswazah Universiti Malaysia Sabah 2014 (Pindaan Tahun 2021) Manual Kualiti MS ISO 9001:2015 Universiti Malaysia Sabah. Akta MQA Code of Practice for Programme Accreditation (COPPA) Standards dan Programme Standards yang dikeluarkan oleh MQA. Kerangka Kelayakan Malaysia (MQF). Pekeliling dan Garis Panduan MQA yang berkaitan Pekeliling dan Garis Panduan JPT yang berkaitan Programme Standards yang dikeluarkan oleh Majlis Akreditasi Badan Profesional (untuk program yang berkenaan)

3.8 Jawantankuasa Pentadbiran FKI

Bil	Perkara		Butiran
1.	**Keahlian**	**Pengerusi**	Ketua Pentadbiran
		Pengerusi Ganti	Penolong Pendaftar/Pegawai Teknologi Maklumat Kanan
		Ahli	Semua kakitangan pentadbiran daripada semua skim perkhidmatan
		Tempoh Lantikan	-

		Setiausaha	Penolong Pegawai Tadbir
		Urus setia	Seksyen Pentadbiran
2.	**Kuorum**		Dua per tiga (2/3)
3.	**Kekerapan**		4 kali setahun
	Fungsi dan Kuasa		Mesyuarat ini bertanggungjawab kepada Jawatankuasa Eksekutif & Kewangan FKI dalam hal ehwal penyelarasan dan pengurusan pentadbiran fakulti. Antara fungsi dan bidang kuasa jawatankuasa ini ialah: **MEMPERAKUKAN** 1. Merancang dan memperakukan perkara berkaitan aktiviti pentadbiran sepanjang tahun; **MELAPORKAN** 1. Laporan hal ehwal Sumber Manusia berkaitan kehadiran, Latihan, Cuti kakitangan, dan hal ehwal berkaitan sumber manusia yang lain; 2. Hal ehwal kewangan belanja mengurus, wang panjar, kad kredit dan tabung amanah fakulti; 3. Cadangan dan melaksanakan aktiviti pengurusan kualiti di fakulti; 4. Keselamatan dan kesihatan Kakitangan; 5. Aduan pelanggan dan piagam pelanggan
5.	**Rujukan**		(ii) Perlembagaan Universiti Malaysia Sabah, Peraturan NO 1 Peraturan UMS (Peraturan-peraturan Mesyuarat Senat) 1998. (iii) Pekeliling Pendaftar Garis Panduan Keurusetiaan Mesyuarat Utama Fakulti, Pusat dan Institut di UMS Bil 3/2017.

4.0 Jenis Mesyuarat

4.1 Mesyuarat utama di fakulti hendaklah terbahagi kepada tiga jenis iaitu:-

MESYUARAT BIASA

(a) Mesyuarat biasa hendaklah diadakan pada tarikh-tarikh tertentu yang ditetapkan terlebih dahulu oleh urus setia mesyuarat dan biasanya hendaklah tidak kurang daripada sekali dalam dua bulan. Jika sesuatu mesyuarat biasa tidak dapat diadakan pada tarikh yang telah ditetapkan oleh kerana sesuatu sebab, kecuali ketiadaan kuorum, maka mesyuarat itu hendaklah ditunda biasanya ke hari yang sama pada minggu berikutnya.

MESYUARAT KHAS

(b) Mesyuarat khas untuk membincangkan perkara-perkara yang tertentu hendaklah diadakan:

(i) Apabila diarahkan oleh Dekan; **atau**
(ii) Apabila ada permintaan daripada sekurang-kurangnya satu perlima (1/5) daripada bilangan ahli mesyuarat yang berada di Malaysia pada masa itu.

MESYUARAT LUAR BIASA.

(c) Sesuatu mesyuarat luar biasa boleh diadakan pada bila-bila masa jika Dekan berpendapat mesyuarat sedemikian perlu diadakan untuk kepentingan Fakulti.

5.0 Pemberitahuan Mesyuarat

5.1 Pemberitahuan Mesyuarat

(a) Pemberitahuan mengenai sesuatu mesyuarat dengan menyatakan tempat, tarikh dan masa mesyuarat itu hendaklah dikeluarkan selewat-lewatnya:-

(i) Empat belas (14) sebelum tarikh mesyuarat;
(ii) Empat (4) hari sebelum tarikh mesyuarat bagi mesyuarat khas; dan
(iii) Enam puluh (60) sebelum tarikh mesyuarat bagi mesyuarat luar biasa.

(b) Pemberitahuan mengenai mesyuarat-mesyuarat biasa dan khas hendaklah dibuat secara bertulis. Pemberitahuan mengenai mesyuarat luar biasa boleh dibuat secara bertulis atau secara lisan.

(c) Pemberitahuan mengenai sesuatu mesyuarat boleh dianggap telah disampaikan kepada seorang ahli mesyuarat jawatankuasa tersebut sekiranya pemberitahuan itu telah disampaikan kepadanya.

6.0 Agenda Mesyuarat

6.1 Agenda Mesyuarat

(a) Agenda bagi mesyuarat biasa hendaklah diedarkan kepada ahli-ahli selewatnya tujuh (7) hari sebelum tarikh mesyuarat. Agenda bagi mesyuarat-mesyuarat khas dan luar biasa hendaklah disampaikan bersama-sama dengan pemberitahuan mesyuarat.

(b) Seorang ahli yang berkehendakkan supaya sesuatu perkara dimasukkan dalam agenda mesyuarat biasa hendaklah menyampaikan kepada Setiausaha sesuatu kertas kerja/dasar mengenainya selewat-lewatnya sepuluh (10) hari sebelum tarikh mesyuarat.

(c) Sekiranya dipersetujui dengan suara terbanyak oleh ahli-ahli yang hadir, perkara-perkara yang tidak dimasukkan dalam agenda mesyuarat biasa boleh dikemukakan untuk perbincangan di bawah perkara "hal-hal lain". Tiada

sesuatu perkara boleh dibincangkan dalam mesyuarat khas atau mesyuarat luar biasa melainkan perkara itu telah dimasukkan dalam agenda.

7.0 Kuorum

7.1 Kuorum

(a) Kuorum untuk mesyuarat biasa dan mesyuarat khas ialah sepertiga (1/3) daripada bilangan ahli mesyuarat jawatankuasa tersebut yang ada di Malaysia pada masa itu. Kuorum untuk mesyuarat luar biasa ialah seperempat (1/4) daripada bilangan ahli yang berada di Malaysia pada masa itu.

(b) Jika kuorum tidak diperolehi tiga puluh (30) minit selepas waktu mesyuarat biasa sepatutnya dimulakan maka mesyuarat itu hendaklah ditunda tarikh lain yang ditetapkan oleh Dekan. Pemberitahuan mengenai tarikh mesyuarat yang baru itu hendaklah dikeluarkan selewat-lewatnya empat puluh lapan (48) jam terlebih dahulu.

(c) Jika sekiranya kuorum tidak juga diperolehi setengah (1/2) jam selepas waktu mesyuarat yang baru itu sepatutnya dimulakan, maka mesyuarat itu hendaklah dimulakan pada waktu itu juga dan apa-apa keputusan yang diambil hendaklah dianggap seolah-olah keputusan itu diambil dalam mesyuarat yang ada kuorom dengan syarat bahawa tiadak ada apa-apa perkara baru telah ditambahbaik kepada ahli mesyuarat tersebut.

8.0 Penangguhan dan Menamatkan Mesyuarat

10.1 Penangguhan dan Menamatkan Mesyuarat

(a) Sesuatu mesyuarat biasa hendaklah ditamatkan atau ditangguhkan selepas telah berjalan selama dua setengah (2 ½) jam kecuali jika ahli mesyuarat tersebut membuat ketetapan supaya mesyuarat itu diteruskan lagi selepas itu.

(b) Sambungan bagi mesyuarat yang ditangguhkan menurut peraturan di atas hendaklah diadakan pada tarikh dan masa yang ditetapkan oleh ahli mesyuarat tersebut tetapi tidak lewat daripada tujuh (7) hari selepas tarikh penangguhan itu. Mesyuarat sambungan itu hendaklah dianggap sebagai sebahagian daripada mesyuarat asal yang telah ditangguhkan dan tidak ada apa-apa perkara baru boleh dikemukakan di dalamnya kecuali di bawah perkara "Hal-hal Lain." Sesuatu mesyuarat sambungan hendaklah ditamatkan selepas ia berjalan selama dua setengah (2 ½) jam kecuali jika ahli mesyuarat tersebut membuat ketetapan supaya mesyuarat itu diteruskan lagi selepas itu.

(d) Jika ada sesuatu perkara dalam agenda yang masih belum dibincangkan ketika mesyuarat ditamatkan menurut peraturan 7 (a) atau 7 (b) di atas, maka perkara itu hendaklah dimasukkan ke dalam agenda bagi mesyuarat biasa yang berikutnya.

(d) Mesyuarat khas dan luar biasa dijalankan seberapa lama yang difikirkan perlu oleh ahli mesyuarat tersebut.

9.0 Minit Meysuarat

9.1 Minit Mesyuarat

(a) Minit mesyuarat biasa, mesyuarat khas dan mesyuarat luar biasa hendaklah diedarkan kepada ahli-ahli selewat-lewatnya dua puluh satu (21) hari selepas tarikh mesyuarat yang berkaitan.

(b) Minit mesyuarat biasa hendaklah dikemukakan untuk pengesahan ahli mesyuarat tersebut dan membincangkan perkara-perkara berbangkit dalam mesyuarat biasa yang berikutnya. Minit mesyuarat khas atau luar biasa hendaklah dikemukakan untuk pengesahan ahli mesyuarat tersebut dalam suatu mesyuarat biasa dengan seberapa segera yang boleh. Pindaan ke atas minit sesuatu mesyuarat, jika ada, hendaklah dilakukan sebelum minit itu disahkan.

(c) Sebaik sahaja minit bagi sesuatu mesyuarat itu disahkan oleh ahli mesyuarat, satu salinan minit mesyuarat tersebut hendaklah ditandatangani oleh Pengerusi mesyuarat yang mengesahkan minit tersebut serta disimpan sebagai dokumen rasmi Fakulti.

(d) Selepas minit sesuatu mesyuarat disahkan dalam sesuatu mesyuarat yang sah menurut Peraturan-peraturan ini, maka tiada sesuatu bantahan boleh dibuat sama ada berkenaan apa-apa kandungan minit tersebut atau berkenaan sah atau tidaknya mesyuarat yang berkaitan itu.

10.0 Keputusan Secara Mesyuarat

10.1 Keputusan Secara Mesyuarat

(a) Sesuatu keputusan mesyuarat biasanya adalah dibuat berasaskan pertemuan pendapat kesemua ahli yang hadir dalam sesuatu mesyuarat. Bagaimanapun, jika sekiranya dalam sesuatu keadaan yang tertentu didapati perlu menjalankan pengundian atas sesuatu perkara, maka tiap-tiap ahli yang hadir berhak kepada satu undi.

(b) Sebarang keputusan mesyuarat yang bertanggungjawab untuk melulus, hendaklah dipengerusikan oleh Dekan.

(c) Sekiranya terdapat kesamaan undi mengenai sesuatu perkara, maka Pengerusi berhak menggunakan undi kedua atau undi pemutus.

(d) Pengundian hendaklah dijalankan secara terbuka kecuali jika dikehendaki sebaliknya oleh sekurang-kurangnya dua pertiga (2/3) daripada ahli-ahli yang hadir.

(e) Minit-minit mesyuarat hendaklah merekodkan hanya keputusan mesyuarat dan tidak pendapat ahli-ahli secara perseorangan. Seseorang ahli yang tidak bersetuju dengan sesuatu keputusan mesyuarat boleh meminta supaya dicatatkan dalam minit-minit mesyuarat yang berkaitan bahawa ia tidak menyertai keputusan itu dengan syarat permintaan demikian dibuat dalam mesyuarat itu juga dan ahli yang berkenaan tidak boleh meminta hujah-hujahnya dicatatkan.

10.2 Keputusan Secara Edaran

(a) Sekiranya keputusan perlu dibuat dengan segera atas sesuatu perkara penting maka dengan persetujuan Dekan perkara itu boleh dikelilingkan dengan surat kepada ahli-ahli untuk mendapatkan kelulusan mereka. Ahli-ahli hendaklah diberi masa selama tujuh (7) hari untuk memberitahu Setiausaha sama ada mereka bersetuju, berkecuali atau tidak bersetuju atas perkara yang dikemukakan secara pekeliling itu.

(b) Setiap keputusan, sama ada bersetuju, berkecuali atau tidak bersetuju hendaklah disampaikan secara bertulis kepada Setiausaha dalam masa tujuh (7) hari yang ditetapkan. Sekiranya jawapan tidak diperolehi dalam tempoh yang ditetapkan tersebut pihak Urusetia boleh menganggap bahawa ahli tersebut bersetuju meluluskannya.

(c) Keputusan ahli mesyuarat mengenai sesuatu perkara yang dikelilingkan adalah diasaskan kepada suara terbanyak ahli-ahli yang menyampaikan keputusannya menurut peraturan 9 (ii) di atas dengan syarat bahawa bilangan ahli-ahli yang memberi keputusannya, termasuk keputusan-keputusan berkecuali, adalah cukup untuk memperolehi kuorum bagi sesuatu mesyuarat biasa. Keputusan itu hendaklah dilaporkan dalam mesyuarat biasa yang berikutnya serta direkodkan dalam minit mesyuarat tersebut.

(d) Walau apa pun yang diperuntukkan di bawah peraturan-peraturan lain, sekiranya ada dua (2) orang ahli atau lebih yang meminta supaya perkara yang dikelilingkan itu dibincangkan dalam suatu mesyuarat, maka pekeliling itu hendaklah ditangguhkan dan dibincangkan dalam suatu mesyuarat biasa atau mesyuarat khas menurut mana yang difikirkan sesuai oleh Dekan.

11.0 Kerahsiaan Mesyuarat

11.1 Kerahsian Mesyuarat

(a) Perbincangan-perbincangan dan lain-lain perjalanan mesyuarat hendaklah dianggap sebagai rahsia dan tidak boleh diberitahu kepada mana-mana pihak kecuali atas prinsip "perlu tahu."

(b) Kertas-kertas agenda dan minit-minit mesyuarat adalah dikelaskan SULIT, dengan itu ia tidak boleh diedarkan sebahagian atau seluruhnya kepada mana-mana pihak lain, sama ada di dalam mahupun di luar fakulti, melainkan dengan kebenaran bertulis daripada Dekan.

14. Syarat-Syarat Lain

12.1 Syarat-syarat lain

(a) Peraturan-peraturan ini boleh dipinda pada bila-bila masa oleh ahli mesyuarat menerusi suatu ketetapan yang dibuat dalam mesyuarat serta dipersetujui oleh sekurang-kurangnya dua pertiga (2/3) daripada ahli-ahli yang hadir. Pindaan-pindaan itu hanya boleh dikuatkuasakan mulai daripada mesyuarat biasa yang berikutnya.

(b) Mana-mana bahagian daripaada peraturan-peraturan ini, kecuali peraturan-peraturan berkenaan kuorum mesyuarat, boleh digantung kuatkuasanya bagi sesuatu mesyuarat dengan syarat dipersetujui oleh sekurang-kurangnya dua pertiga (2/3) daripada ahli-ahli yang hadir.

(c) Sekiranya timbul perselisihan pendapat tentang mana-mana bahagian daripada peraturan-peraturan ini, maka perkara itu hendaklah diputuskan dalam suatu Mesyuarat.

Disediakan oleh
Ketua Pentadbiran
Bahagian Pentadbiran
31 Disember 2023

OUR FACILITIES

E-COMMERCE APPLICATION R&D LAB

1. Peralatan ICT:
   - 60 unit Desktop PC (Windows 11)
   - 2 unit LCD Projector
   - 2 unit Motorized White Screen
   - PA System
   - Internet (LAN & Wi-Fi)
2. Kapasiti: 65 pax
3. 6 unit Split Unit Air Conditioner

COMPUTER GRAPHIC R&D LAB

1. Peralatan ICT:
   - 1 unit LCD Projector
   - 1 unit Motorized White Screen
   - PA System
   - Internet (LAN & Wi-Fi)
2. Kapasiti: 45 pax
3. 3 unit Split Unit Air Conditioner

GAMES & COMPUTER ENTERTAINMENT STUDIO

1. Peralatan ICT:
   - 30 unit Desktop PC (Windows 11)
   - 1 unit LCD Projector
   - 1 unit Motorized White Screen
   - PA System
   - Internet (LAN & Wi-Fi)
2. Kapasiti: 40 pax
3. 4 unit Split Unit Air Conditioner

OUR FACILITIES

WINDOWS-BASED MOBILE COMPUTING LAB

1. Peralatan ICT:
   - 34 unit Desktop PC (Windows 11)
   - 1 unit LCD Projector
   - 1 unit Motorized White Screen
   - PA System
   - Internet (LAN & Wi-Fi)
2. Kapasiti: 45 pax
3. 4 unit Split Unit Air Conditioner

VIRTUAL DESKTOP INFRASTRUCTURE (VDI) LAB

1. Peralatan ICT:
   - 1 unit LCD Projector
   - 1 unit Motorized White Screen
   - PA System
   - Internet (LAN & Wi-Fi)
2. Kapasiti: 45 pax
3. 2 unit Split Unit Air Conditioner

POST PRODUCTION LAB

1. Peralatan:
   - 1 unit Studio Kedap Bunyi
   - Internet (Wi-Fi)
2. Kapasiti: 3 pax
3. Centralized Air Conditioner

OUR FACILITIES

ANIMATION STUDIO

1. Peralatan:
   - 1 set Green Screen
   - 2 unit LED Televisyen
   - Internet (Wi-Fi)
2. Kapasiti: 10 pax
3. 4 unit Split Unit Air Conditioner

PORTAL LAB

1. Peralatan ICT:
   - 31 unit Desktop PC (Windows 11)
   - 1 unit LCD Projector
   - Internet (Wi-Fi)
2. Kapasiti: 30 pax
3. Air Conditioner

WIRELESS LAB

1. Peralatan ICT:
   - 19 unit APPLE iMAC (Macintosh)
   - 1 unit LCD Projector
   - 1 unit Portable White Board
   - Internet (Wi-Fi)
2. Kapasiti: 19 pax
3. Air Conditioner

OUR FACILITIES

DATABASE LAB

1. Peralatan ICT:
   - 60 unit Desktop PC (Windows 11)
   - 1 unit LCD Projector
   - 1 unit White Screen
   - PA System
   - Internet (Wi-Fi)
2. Kapasiti: 60 pax
3. Air Conditioner

DIGITAL MAKER HUB (DMH) LAB

1. Peralatan ICT:
   - 30 unit Desktop PC (Windows 11)
   - 1 unit LCD Projector
   - 1 unit White Screen
   - Internet (Wi-Fi)
2. Kapasiti: 30 pax
3. Air Conditioner

NETWORK 1 LAB

1. Peralatan ICT:
   - 26 unit Desktop PC (Windows 11)
   - 1 unit LCD Projector
   - 1 unit White Screen
   - Internet (Wi-Fi)
2. Kapasiti: 26 pax
3. Air Conditioner

OUR FACILITIES

NETWORK 2 LAB

1. Peralatan ICT:
   - 22 unit Desktop PC (Windows 11)
   - 1 unit LCD Projector
   - 1 unit White Board
   - Internet (Wi-Fi)
2. Kapasiti: 22 pax
3. Air Conditioner

COMPUTER 3 LAB

1. Peralatan ICT:
   - 60 unit Desktop PC (Windows 11)
   - 1 unit LCD Projector
   - 1 unit White Screen
   - 1 unit White Board
   - Internet (Wi-Fi)
2. Kapasiti: 60 pax
3. Air Conditioner

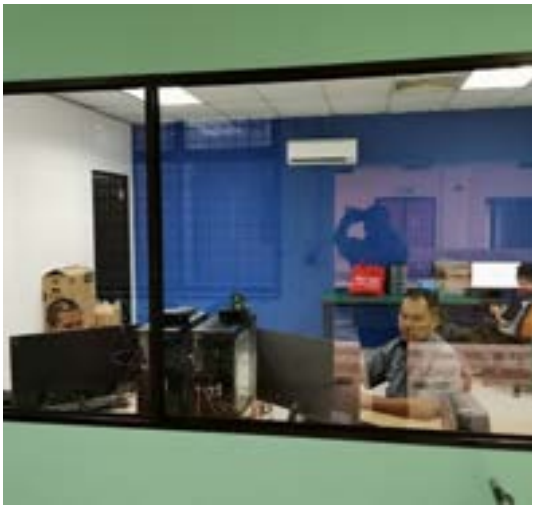
HAINA LAB

1. Peralatan ICT:
   - 1 unit LCD Projector
   - 1 unit White Screen
   - Switch Rack / Network Teaching Rack
   - PA System
   - Internet (Wi-Fi)
2. Kapasiti: 25 pax
3. Air Conditioner

OUR FACILITIES

CELCOM TIMUR LAB

1. Peralatan ICT:
   - 2 unit Desktop PC (Windows 11)
   - Server Rack
   - 1 unit White Board
   - Internet (Wi-Fi)
2. Kapasiti: 15 pax
3. Air Conditioner



MYCYBERSECURITY LAB

1. Peralatan ICT:
   - 2 unit Computer Workstation (Windows 11)
   - 1 unit Clean Bench LVG-4AG-F8 Laminar Flow Cabinet
   - 1 unit Televisyen
   - White Board
   - Internet (Wi-Fi)
2. Kapasiti: 2 pax
3. Air Conditioner

SMART CLASSROOM

1. Peralatan ICT:
   - 3 unit Smart TV
   - 1 unit White Board
   - PA System
   - Internet (Wi-Fi)
2. Kapasiti: 32 pax
3. Air Conditioner

OUR FACILITIES

POSTGRADUATE RESEARCH CENTER

1. Kemudahan:
   - 12 kubikel
   - Discussion Table (6 pax)
   - 1 unit White Board Mudah Alih
   - Internet (Wi-Fi)
2. Kapasiti: 12 pax
3. 2 unit Split Unit Air Conditioner

MEETING ROOM (KOTA KINABALU CAMPUS)

1. Kemudahan:
   - 1 set Video Conference
   - Internet (Wi-Fi)
2. Kapasiti: 30 pax
3. Centralized Air Conditioner

DISCUSSION ROOM (LABUAN CAMPUS)

1. Kemudahan:
   - 1 set Video Conference
   - 1 unit Televisyen Mudah Alih
   - Internet (LAN & Wi-Fi)
2. Kapasiti: 8 pax
3. Centralized Air Conditioner

OUR FACILITIES

BILIK GERAKAN PERSATUAN MAHASISWA FKI (LABUAN CAMPUS)

1. Kemudahan:
   - 1 unit meja pejabat
   - 4 unit kerusi pejabat
   - 5 unit kerusi bankuet
   - Internet (LAN & Wi-Fi)
2. Kapasiti: 5 pax
3. Centralized Air Conditioner

BILIK FINAL YEAR PROJECT (FYP) (LABUAN CAMPUS)

1. Kemudahan:
   - 2 unit Meja Panjang
   - 7 unit kerusi pejabat
   - Internet (Wi-Fi)
2. Kapasiti: 7 pax
3. Centralized Air Conditioner

STUDENT LOUNGE (LABUAN CAMPUS)

1. Kemudahan:
   - 26 unit meja & kerusi
   - Internet (LAN & Wi-Fi)
   - Mesin Air COWAY
2. Kapasiti: 26 pax
3. 2 unit Split Unit Air Conditioner

OUR FACILITIES

STUDENT LOUNGE (KOTA KINABALU CAMPUS)

1. Kemudahan:
   - Bean Bag
   - Rak Buku
   - Internet (Wi-Fi)
2. Kapasiti: 15 pax
3. Air Conditioner

SURAU (LABUAN CAMPUS)

1. Kemudahan:
   - Sejadah
   - Al-Quran/Bahan Bacaan
   - Kipas Angin Berdiri
   - Kabinet Kayu
   - Internet (Wi-Fi)
2. Kapasiti: 4 pax
3. Centralized Air Conditioner

SURAU (KOTA KINABALU CAMPUS)

1. Kemudahan:
   - Sejadah
   - Al-Quran/Bahan Bacaan
   - Kipas Angin
   - Kabinet Kayu
   - Internet (Wi-Fi)
2. Kapasiti: 25 pax
3. Air Conditioner

TASK FORCE

QS RANKING

TERMS OF REFERENCE	1. To plan processes and activities that need to be implemented in order to enable the faculty to be listed in the QS Subject Ranking 2. To identify the individual components of the QS Subject Ranking scoring criteria and propose measures to the faculty to overcome areas with deficiencies and increase the scoring for the faculty's programs 3. To propose strategies and action plans that will enable the faculty's QS Subject Ranking to continuously improve year to year 4. To monitor the implementation of processes and activities that will contribute towards improving the faculty's QS Subject Ranking 5. To discuss any academic, research and other matters that can contribute towards improving the faculty's QS Subject Ranking 6. To support the faculty in any QS Subject Ranking activity 7. To report on a monthly basis on the progress of the faculty in terms of fulfilling its objective to be listed in the QS Subject Ranking during every faculty meeting

TASK FORCE

PENJANAAN DAN INOVASI

TERMS OF REFERENCE

1. Merangka pelan strategik penjanaan pendapatan dan mengenalpasti niche bagi setiap J/F/P/I/U yang diwakili
2. Merancang, melaksana, menyelaras, memantau dan mengembangkan aktiviti penjanaan pendapatan di J/F/P/I/U bagi mencapai sasaran perancangan tahunan yang ditetapkan J/F/P/I/U
3. Menjadi pegawai perhubungan di antara J/F/P/I/U mereka dengan Pusat Pelaburan dan Endowmen (CIE) serta J/F/P/I/U lain dalam perkara-perkara yang berkaitan seperti pengumpulan data, penyelesaian masalah, penambahbaikan proses kerja, aktiviti promosi, pengurusan kewangan dan lain-lain yang berkaitan dengan aktiviti penjanaan pendapatan
4. Menjadi wakil J/F/P/I/U di dalam Jawatankuasa Teknikal Penjanaan Pendapatan CIE (JTPP-CIE) dan pada apa-apa mesyuarat/bengkel/perbincangan berkaitan dengan penjanaan pendapatan yang diadakan oleh CIE
5. Membentangkan perancangan aktiviti penjanaan pendapatan oleh J/F/P/I/U masing-masing dan menetapkan sasaran jumlah penjanaan pendapatan yang dipersetujui oleh J/F/P/I/U kepada CIE, sekiranya perlu
6. Memantau dan melaporkan pencapaian aktiviti penjanaan pendapatan J/F/P/I/U kepada CIE
7. Menyokong dan menggiatkan aktiviti penjanaan pendapatan Universiti, dan
8. Menjalankan apa-apa bentuk tugasan berkaitan dengan penjanaan pendapatan dari masa ke semasa seperti diarahkan oleh pihak Universiti
9. Merangka dan merancang strategi untuk mempromosikan inovasi di fakulti
10. Mengenal pasti penyelidikan, produk, proses dan perkhidmatan dalam fakulti yang boleh diperbaiki menerusi inovasi
11. Melaksanakan inisiatif dan aktiviti yang akan menghasilkan inovasi selaras dengan pelan strategik inovasi fakulti

TASK FORCE

KERJASAMA STRATEGIK AKADEMIK FKI

TERMS OF REFERENCE	1. Mengenal pasti / pemudah cara / mengurus peluang-peluang mewujudkan kerjasama program akademik dengan rakan strategik di dalam dan luar negara 2. Pemudah cara / pelaksana proses pembangunan program akademik secara double / dual / pengkomersilan (perlesenan etc.)

TASK FORCE

GLOBAL COMPUTING EXCELLENCE

TERMS OF REFERENCE

1. To plan processes and activities that need to be implemented in order to enable the faculty to be listed in the targeted computing related subject excellence indicator.
2. To identify the individual components of the targeted computing related subject excellence indicator scoring criteria and propose measures to the faculty to overcome areas with deficiencies and increase the scoring for the faculty's programs.
3. To propose strategies and action plans that will enable the faculty's targeted computing related subject excellence indicator to continuously improve year to year.
4. To monitor the implementation of processes and activities that will contribute towards improving the faculty's targeted computing related subject excellence indicator.
5. To discuss any academic, research and other matters that can contribute towards improving the faculty's targeted computing related subject excellence indicator.
6. To support the faculty in any targeted computing related subject excellence indicator activity.
7. To report on a monthly basis on the faculty's progress in fulfilling its objective to be listed in the targeted computing related subject excellence indicator during each faculty meeting.
8. Other tasks will be given from time to time.

TASK FORCE

KEROHANIAN

TERMS OF REFERENCE	1. Merancang, menyelaras dan memantau aktiviti kerohanian yang bertujuan untuk mengukuhkan nilai moral dan keharmonian di kalangan staf. 2. Menganjurkan sesi pengajaran dan perkongsian ilmu berkaitan dengan nilai-nilai keagamaan, etika dan spiritualiti. 3. Melaksanakan program-program kebajikan dan amal sebagai sebahagian usaha-usaha keagamaan, termasuk bantuan kemanusiaan, sumbangan kepada masyarakat yang memerlukan, atau aktiviti-aktiviti sukarela. 4. Menjadi Penyelaras/Ketua Kontinjen bagi program-program yang dijalankan di universiti seperti Perarakan Sambutan Maulidur Rasul peringkat UMS.

TASK FORCE

FKI MYRA

TERMS OF REFERENCE

1. To conduct a quarterly review of the faculty's MyRA performance.
2. To identify the strengths and weaknesses of the faculty's research performance based on the faculty's MyRA score.
3. To propose strategies and plan research-related activities for improving the faculty's MyRA score.
4. To monitor provision of evidences by the faculty's academic staff to support the university's MyRA assessment.
5. To discuss any research-related matters that can contribute towards the faculty's MyRA standing.
6. To support the faculty in any MyRA-related activity.

SECTION ACADEMIC & STUDENTS AFFAIRS

ASSOCIATE PROFESSOR TS. DR. LEAU YU BENG

Deputy Dean(Academic & Student Affairs)

Tel : 088-320000 ext. 101242
e-mail : lybeng@ums.edu.my

MOHD FADZLI BIN SARUDI

Assistant Registrar

Tel : 087-503000 ext. 102888
e-mail : fadzli86@ums.edu.my

AG. SUHAIZAN BIN AWANG SUANG

Senior Administrative Assistant (N22)

Tel : 087-503000 ext. 00659
e-mail : aghaizan@ums.edu.my

MOHD AZLAN BIN GANI

Senior Administrative Assistant (N22)

Tel : 087-503000 ext. 101670
e-mail : mdazlan@ums.edu.my

RESTI BINTI YUASRI

Administrative Assistant (N19)

Tel : 088-320000 ext. 103727
e-mail : resti@ums.edu.my

PROGRAMMES OFFERED

UNDERGRADUATE

- Computer Science Cluster (Kota Kinabalu)
  - Bachelor of Computer Science (Software Engineering) Bachelor of Computer Science (Network Engineering) Bachelor of Computer Science (Data Science)
- Information Technology Cluster (Labuan)
  - Bachelor of Information Technology (Multimedia Technology)
  - Bachelor of Information Technology (Business Computing)

PROGRAMME SUMMARY

SOFTWARE ENGINEERING
UH6481001

Bachelor of Computer Science with Honours (Software Engineering) is an undergraduate degree programme offered by Faculty of Computing and Informatics at Kota Kinabalu campus. The programme aims to produce graduates with knowledge and skills in software engineering and management of software development projects. Students will be exposed to and trained in the fundamentals of computer systems as well as the advancement of technologies in the field of computer science. The offered courses include computer programming, object-oriented programming, software engineering, human computer interaction, theory of computation, operating system, artificial intelligence, final year project, as named a few. In the final year, students will undergo industrial training as well as complete a project related to software development of any computer science discipline under the supervision of an academic personnel

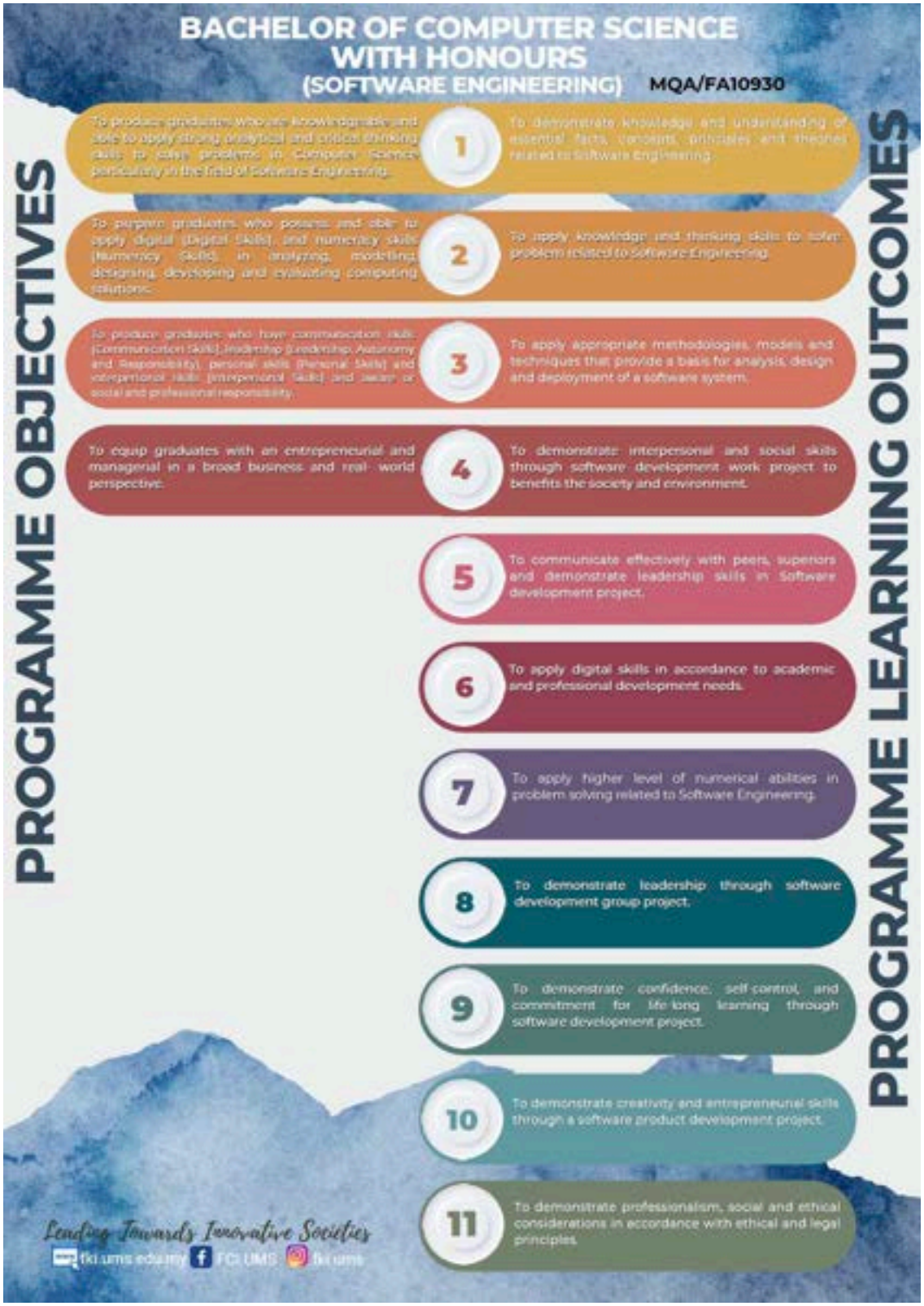
NETWORK ENGINEERING
UH6481002

Bachelor of Computer Science with Honours (Network Engineering) is an undergraduate degree programme offered by Faculty of Computing and Informatics at Kota Kinabalu campus. The programme aims to produce skilled graduates who are competent with strong computer science and networking fundamental and which will prepare them to compete in the job market. Student will be exposed and trained to the fundamental concepts and skills of computer science and majoring in system and computer network. Offered courses are range from a foundation of computer programming, system analysis and design, data communication, computer networks, distributed system, system management, network management and parallel computing. Beyond the technical skills, several soft skills including interpersonal communication skills, team skills, and management skills are embedded in the appropriate discipline. The students will be exposed with range of applications that connect theory and skills learned in the class to real-world occurrences through the industrial training and demonstration of completing a project during their final year

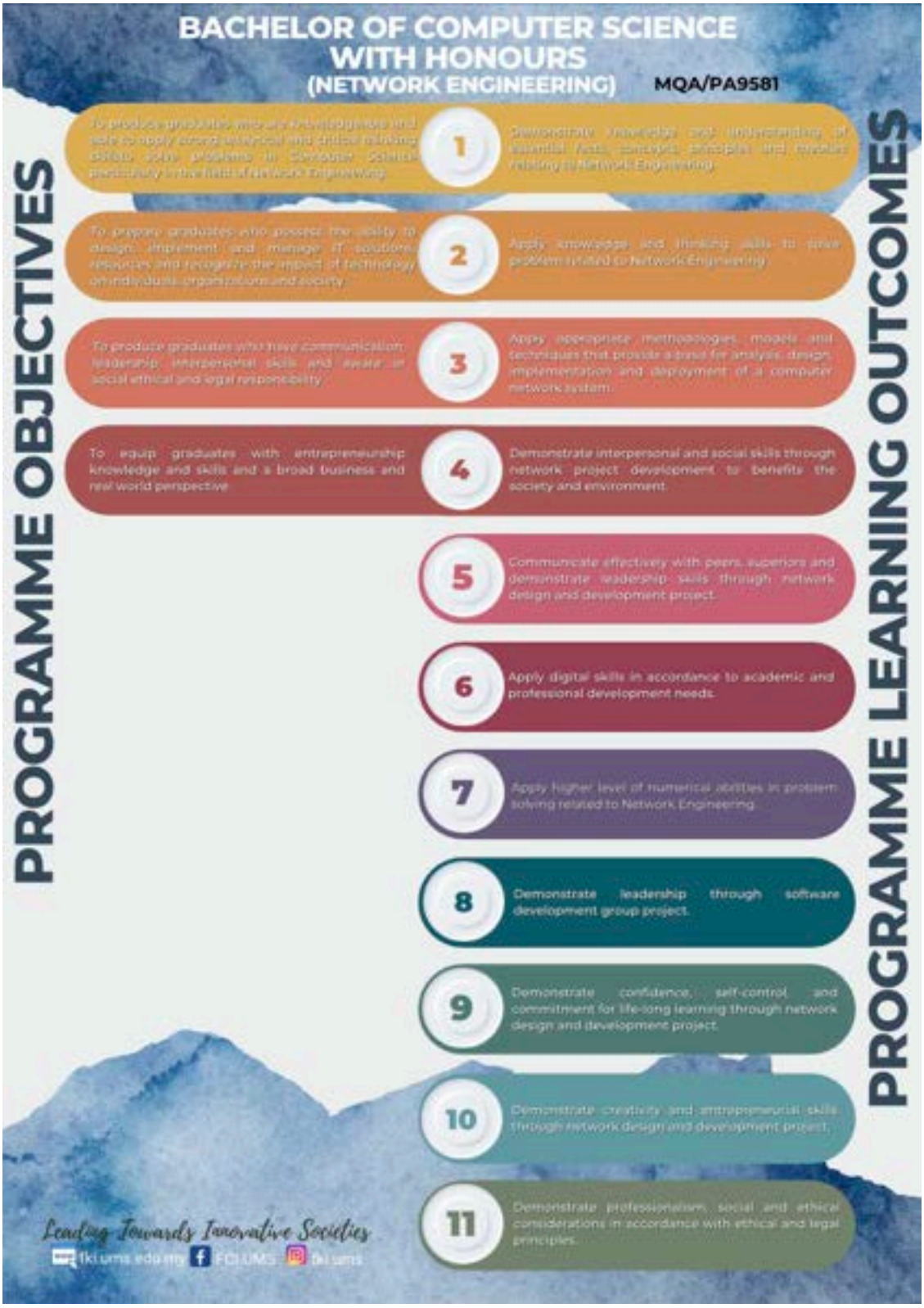
PROGRAMME SUMMARY

MULTIMEDIA TECHNOLOGY UH6481003	Bachelor of Information Technology (BIT) with Honours (Multimedia Technology) is an undergraduate degree programme offered by Faculty of Computing and Informatics at Labuan International Campus. Besides teaching theories, this programme will provide students with skills in the areas of interactive media, graphics arts, audio technology, animation, video and publishing. Students will be exposed with the latest and widely utilized multimedia tools as well as programming languages. This will enhances students' techniques in design and develop multimedia application
BUSINESS COMPUTING UH6481004	Bachelor of Information Technology (BIT) with Honours (Business Computing) is an undergraduate degree programme offered by Faculty of Computing and Informatics at Labuan International Campus. The programme provides exposure and skills on web based system development as well as the knowledge on electronic commerce, covering both the business and technical topics. Students will be exposed with e-commerce operation through presentation tier, business tier and database access. This degree programme will emphasizes instruction in computer literacy, e-commerce web development, programming and internet marketing. This career program follows the currents environment on e-commerce technologies
DATA SCIENCE UH6481005	Bachelor Degree in Computer Science with Honours (Data Science) is an undergraduate degree program offered by the Faculty of Computer and Informatics at the Kata Kinabalu campus. The purpose of the program is to produce skilled and capable graduates in the field of data science, in line with the rapid growth of industries that require the expertise of data scientists. Students will be exposed and trained on the principles of computer science, science and analytics primarily in data mining, visualization techniques, predictive models, and statistics. Among the courses offered include computer programming, data science basics, data visualization, data analysis, data mining, analysis and system design for data science, and other programming languages

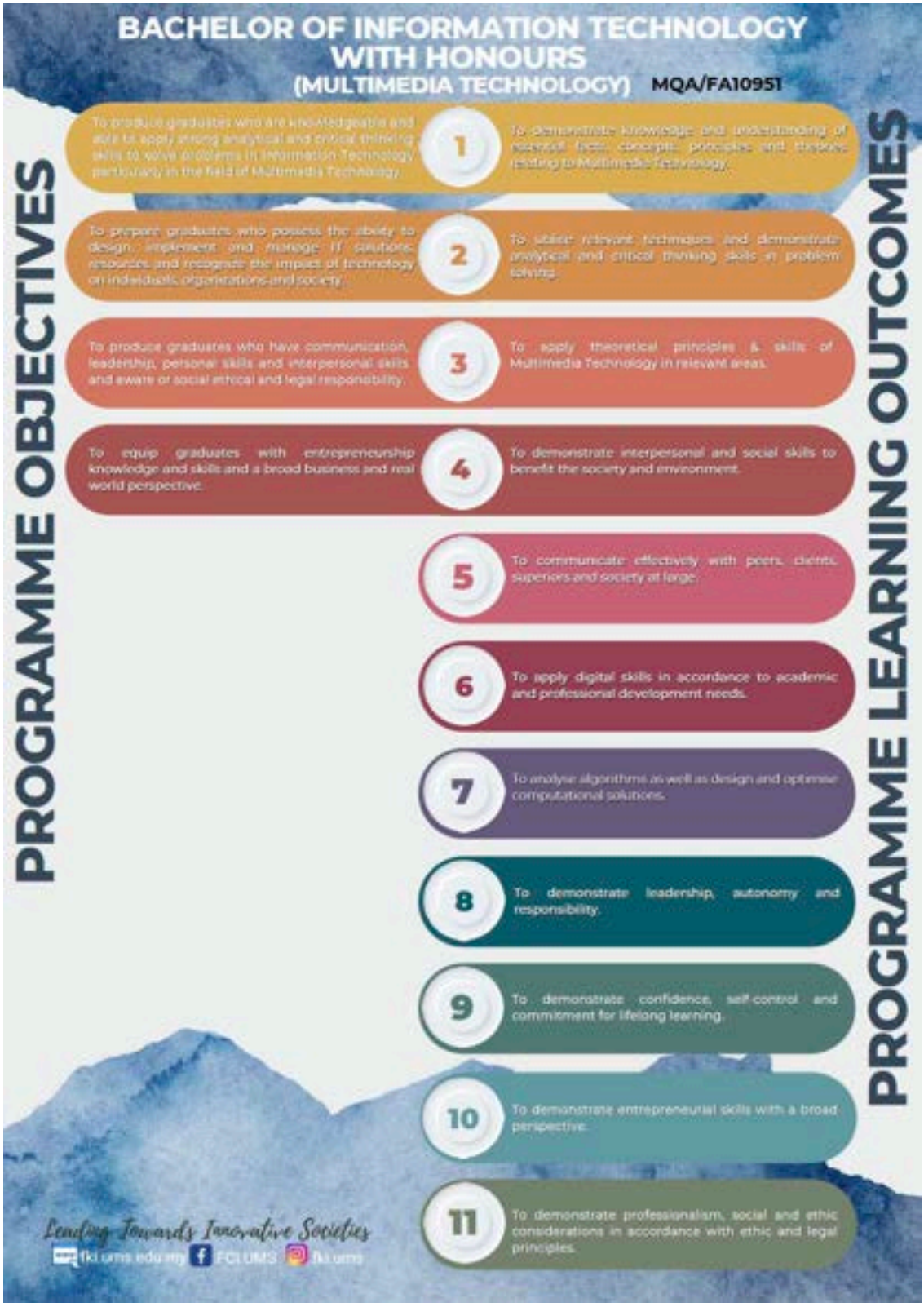
PROGRAMME OBJECTIVES
PROGRAMME LEARNING OUTCOME



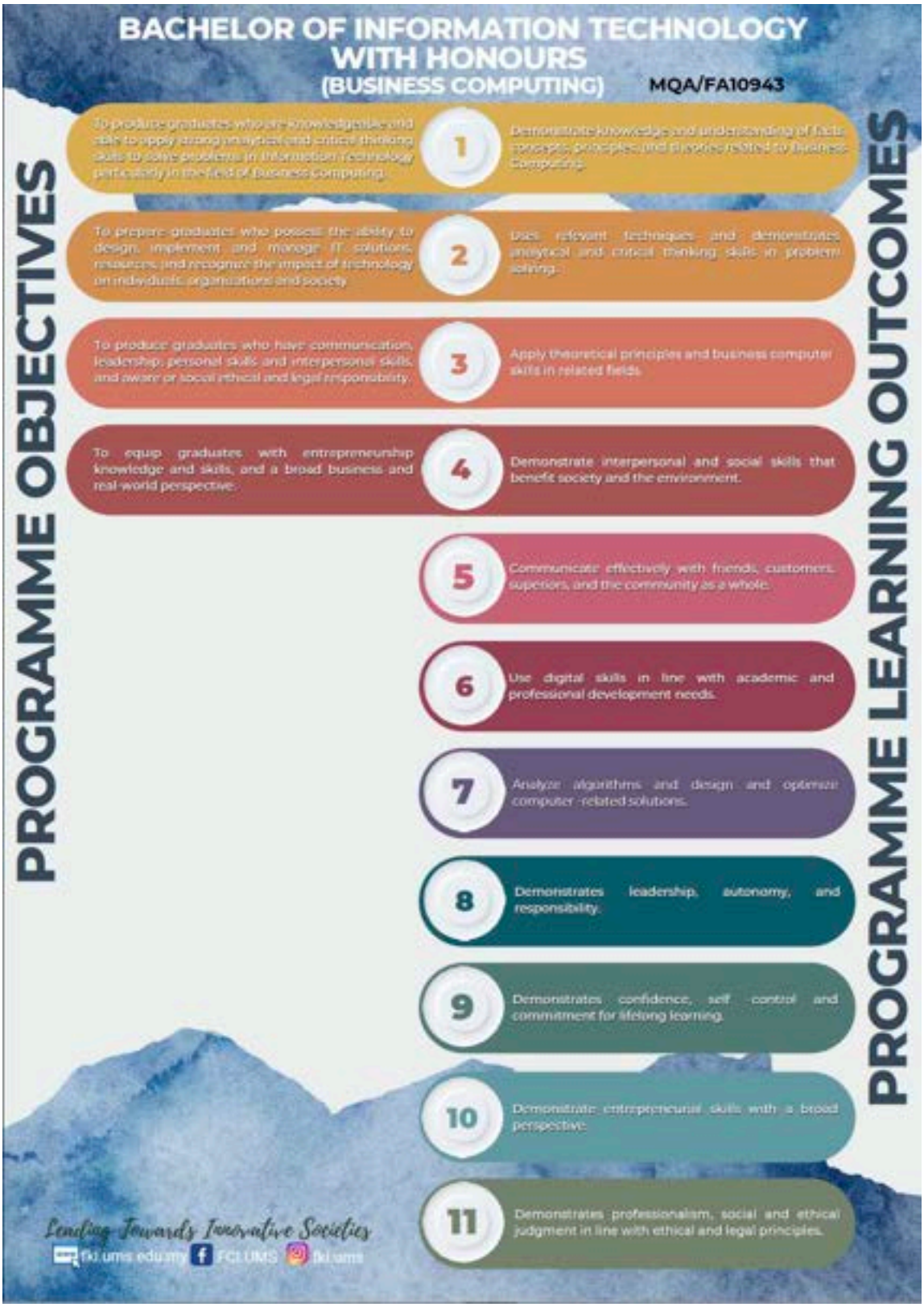
PROGRAMME OBJECTIVES
PROGRAMME LEARNING OUTCOME



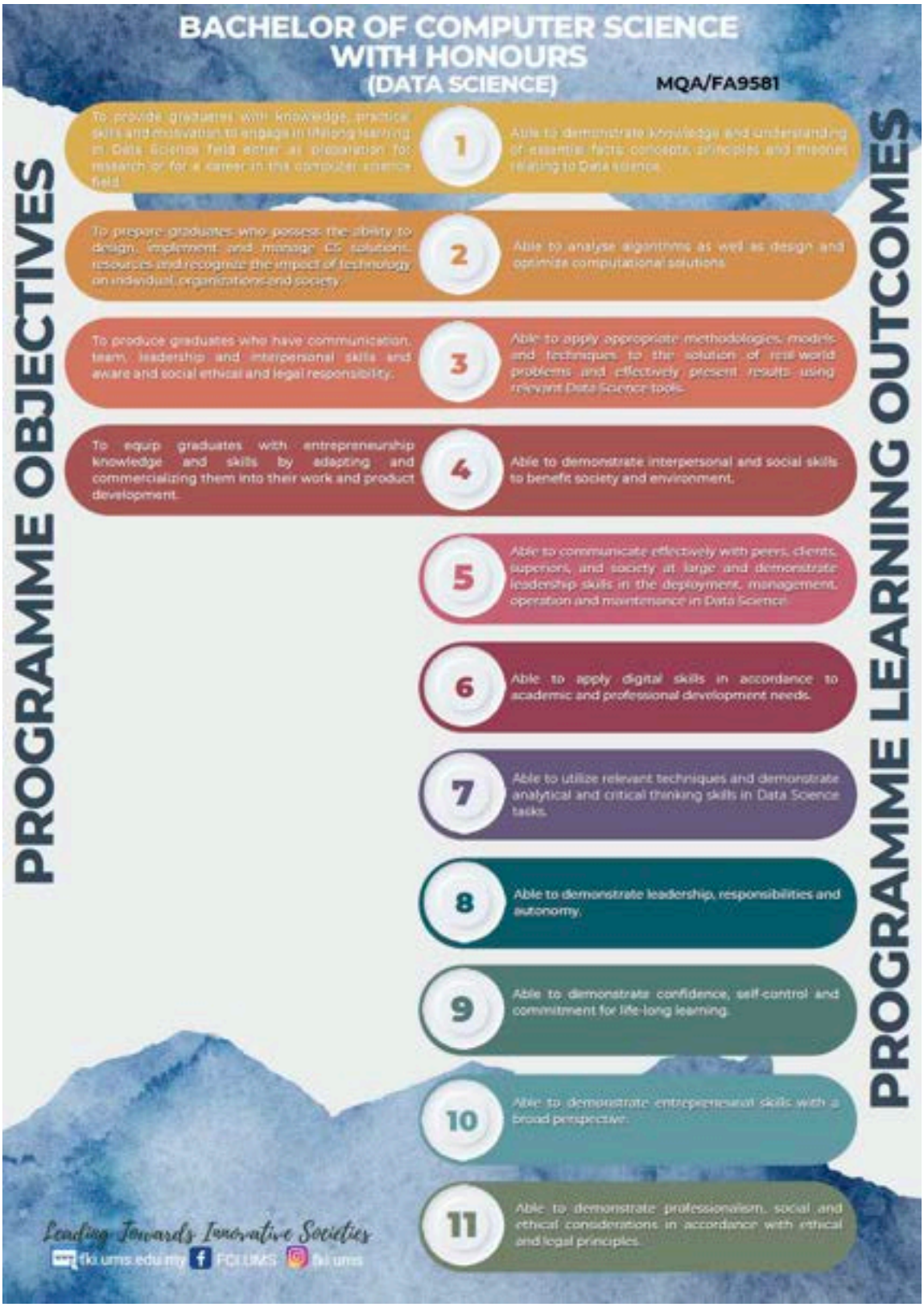
PROGRAMME OBJECTIVES
PROGRAMME LEARNING OUTCOME



PROGRAMME OBJECTIVES
PROGRAMME LEARNING OUTCOME



PROGRAMME OBJECTIVES
PROGRAMME LEARNING OUTCOME



MEET OUR INTELLECTUAL POWER

UH6481001
SOFTWARE ENGINEERING

DR FLORENCE SIA FUI SZE
Head of Program / *Senior Lecturer*

B.Comp Sc (Hons) UMP, MSc., PhD, UMS
Data Mining, Machine Learning/Structured Data Learning, Contrast Subspace Mining, Optimization

088-320000 ext.

florence.sfs@ums.edu.my

PROFESSOR DR. AG. ASRI BIN AG. IBRAHIM
Professor

BComp. Sc. (Hons), MComp. Sc. (Malaya)
PhD (Electronics) (York)
Sonification, Kansei Engineering, UX (HCI), Applied AI

088-320000 ext. 100556

awgasri@ums.edu.my

ASSOC. PROF. DR. NG GIAP WENG
Associate Professor / Professional Technologies

BSc (Hons) Cognitive Sciences, UNIMAS
PhD Computer Science (Augmented Reality), Salford University (UK)
Augmented/Virtual Reality, Interactive Multimedia Technology, Human Factors, Human Computer Interaction

088-320000 ext. 104180

nggiapweng@ums.edu.my

MEET OUR INTELLECTUAL POWER

UH6481001
SOFTWARE ENGINEERING

ASSOC. PROF. TS. DR. CHIN KIM ON
Associate Professor / Professional Technologist

BIT, MSc, PhD (UMS)
Senior IEEE Member
Artificial Neural Networks, Image Processing, Sentiment Analysis, Evolutionary Computing

088-320000 ext. 102369

kimonchin@ums.edu.my

DR. JAMES MOUNTSTEPHENS
Senior Lecturer

BSC. (Hons) (Surrey), PhD Computing (Surrey)
Member, IEEE
Modeling and Simulation, Image Processing, Natural Language Processing, Computer Graphics

088-320000 ext. 102725

james@ums.edu.my

TS. DR. NORAZLINA BINTI KHAMIS
Senior Lecturer / Professional Technologist

BIT (Hons) (Minor Management), (Malaya), MSc (Realtime Software Engineering), (UTM), PhD (UKM)
Certified Software Tester
Software Engineering, Intelligent Software Engineering, Sustainable Software Design, Software Testing, UI/UX

088-320000 ext. 103606

norazlina@ums.edu.my

MEET OUR INTELLECTUAL POWER

UH6481001
SOFTWARE ENGINEERING

DR. SAMRY @ MOHD SHAMRIE SAININ
Senior Lecturer

BIT (Hons) UUM, MIT (Uni. of Sydney), PhD (UMS)
Artificial Intelligence, Machine Learning, Machine Translation, Speech Recognition, Image Recognition

088-320000 ext. 104008

shamrie@ums.edu.my

TS. DR. CHIN PEI YEE
Senior Lecturer / Professional Technologist

BSc. (Hons) Electronis Commerce (UMS), MSc. Software Development (Glasgow, UK), PhD in Information Systems (UniSA, Australia)
Emerging and Collaborative Technologies, The Future of Work, The Philosophy of Technology

088-320000 ext. 101098

peiyee@ums.edu.my

DR. SURAYA BINTI ALIAS
Senior Lecturer

BIT (Hons) AI, Master of IT (UUM), PhD in Computer Science (USM)
Natural Language Processing Language Engineering, Artifical Intelligence, Machine Learning

088-320000 ext. 102679

suealias@ums.edu.my

MEET OUR INTELLECTUAL POWER

UH6481001
SOFTWARE ENGINEERING

DR. SUAINI BINTI SURA
Senior Lecturer

BSc. Info. Studies (Hons) (Information System Management) (UiTM), Mcomp. Sc. (UPM), PhD in Information Systems (Hanyang)
Information Systems, Social Computing, E/S-commerce

088-320000 ext. 101094

su_sura@ums.edu.my

DR. ZAIDATOL HASLINDA BINTI ABDULLAH SANI
Senior Lecturer

BComp, MIT (University of Tasmania, Australia), PhD (York)
User Experience, Usability

088-320000 ext. 104131

linda.sani@ums.edu.my

TS. DR. KHALIFA CHEKIMA
Senior Lecturer / Professional Technologist

BSc. (Hons), MSc. PhD (UMS)
Advanced Machine Intelligence, Natural Language Processing, Big Data Analytics, Information Retrieval, Artificial Intelligence, Machine Learning, Medical Image Processing, IoT

088-320000 ext. 104030

kchekima@ums.edu.my

MEET OUR INTELLECTUAL POWER

UH6481001
SOFTWARE ENGINEERING

NORHAYATI BINTI DAUT
Senior Lecturer (Study Leave)

BSc (Hons), MSc, PhD (UTM)
E-Tourism, Education, Software Engineering, Requirements Engineering, Software Design

088-320000 ext. 101383

ndaut@ums.edu.my

MEET OUR INTELLECTUAL POWER

UH6481002
NETWORK ENGINEERING

TS. DR. TAN SOO FUN
Head of Program / *Professional Technologist*

BSc (Hons) (UMS), MSc, PhD (USM)
Information and Data Security, Cryptography, Network Security, Cybersecurity

088-320000 ext. 102373

soofun@ums.edu.my

ASSOC. PROF. TS. DR. LEAU YU BENG
Associate Professor / Professional Technologist

BSc (Hons) Multimedia Technology (UMS), MCompSc. (Hons) Information Technology (UTM), PhD in Computer Science (Internet Infrastructures Security) (USM)
Cybersecurity, Data and Information Security, Future Network Architectures

088-320000 ext. 101242

lybeng@ums.edu.my

DR. GOHAR RAHMAN
Senior Lecturer

BSCS (Hons), MSCS, PhD (Uni. Tun Hussein Onn)
Cryptography, DNA Cryptography, Mutual Authentication, Key Exchange Protocols

088-320000 ext.

gohar_315@ums.edu.my

MEET OUR INTELLECTUAL POWER

UH6481002
NETWORK ENGINEERING

DR. SALMAH BINTI FATTAH
Senior Lecturer

BIT (Hons), MIT (UKM), PhD (Computer Science (Malaya)
Sensor Networks (Wireless Sensor Networks), Underwater Wireless Sensor Network and Mobile Sensor Network, Multiobjective Optimization, Network System, Internet of Things, Cybersecurity

088-320000 ext. 101083

salmahf@ums.edu.my

TS. NORDIN SAAD
Senior Lecturer / Professional Technologist

BIT, MIT (UUM)
Ethernet Technology, High Speed Network, Mobile Network Technology, Routers Technology, Fiber Optic Technology

088-320000 ext. 100270

nordin@ums.edu.my

SHALIZA HAYATI A. WAHAB
Senior Lecturer

BIT, MIT (UUM)
UAV Path Planning, QoS Model for MANET

088-320000 ext. 100289

shaliza@ums.edu.my

MEET OUR INTELLECTUAL POWER

UH6481002

NETWORK ENGINEERING

NORDALIELA BINTI MOHD RUSLI
Senior Lecturer

BSc (Hons) Information Technology (UiTM), MSc Quantitative Science (UiTM)
Machine Learning, Predictive Analytics, Discrete Mathematics, Data Mining

088-320000 ext. 102152

daliela@ums.edu.my

MEET OUR INTELLECTUAL POWER

UH6481003
MULTIMEDIA TECHNOLOGY

DR. WAN NOORAISHYA BINTI WAN AHMAD
Head of Program / *Senior Lecturer*

BSc (Hons) Multimedia Technology (UMS), Msc Creative Software System (Heriot-Watt), PhD (Visual Informatics) (UKM)
Human-Computer Interaction, Persuasive Technology, User Experience (UX), Affective Computing

087-503000 ext. 101464

aishya@ums.edu.my

ASSOC. PROF. DR. MUZAFFAR BIN HAMZAH
Associate Professor

BCompSc (Hons), MCompSc (UM), PhD IT (UniSA)
Information Visualization, Visual Analytics, Machine Learning

087-503000 ext. 100680

muzaffar@ums.edu.my

DR. CAROLYN BT SALIMUN @ JACKSON
Senior Lecturer

BIT (Hons) (UUM), MScIT (UUM), PhD Computing Science (Glasgow)
Visual Aesthetics, User Experience (UX)

087-503000 ext. 101178

carolyn@ums.edu.my

MEET OUR INTELLECTUAL POWER

UH6481003
MULTIMEDIA TECHNOLOGY

DR. NUR FARAHA BTE HJ. MOHD NAIM
Senior Lecturer

BSc Multimedia Application (BBM Hons) (UUM), MSc (IT), PhD (Comp. Sc.) (UMS)
Kansei Engineering, User Experience, Human Computer Interaction

087-503000 ext.

faraha.naim@ums.edu.my

DR. MOHAMMAD FADHLI BIN ASLI
Senior Lecturer

BSc (Hons), MSc, PhD (UMS)
Visual Analytics, Information Visualization, Data Visualization, Information Design

087-503000 ext.

fadhli.asli@ums.edu.my

RYAN MACDONELL ANDRIAS
Senior Lecturer

BSc (Hons) Multimedia Technology (UMS), MCompSc. Multimedia System (UPM)
Multimedia System, Gamification

087-503000 ext. 101106

ryan@ums.edu.my

MEET OUR INTELLECTUAL POWER

UH6481003
MULTIMEDIA TECHNOLOGY

AHMAD RIZAL BIN AHMAD RODZUAN
Lecturer

BIT (Hons) (UKM), MSc (Sydney)
Gamification, Human-Computer Interaction, User Experience (UX), Creative Thinking and Writing

087-503000 ext. 100884

arizal@ums.edu.my

NURAINI JAMIL
Lecturer

BSc. (Computer) (Hons) (UTM), MEng (Information Engineering) (Inha University)
Electroencephalogram (EEG), Cognitive Abilities, Online Learning

087-503000 ext. 101395

ainjamil@ums.edu.my

AINNECIA YOAG
Lecturer / Study Leave

BIT (Hons) (UUM), MScIT (UUM)
Interface Design

087-503000 ext. 101362

ainnecia@ums.edu.my

MEET OUR INTELLECTUAL POWER

UH6481004
BUSINESS COMPUTING

ASSOC. PROF. DR. GOH SAY LENG
Head of Program / *Associate Professor*

BIT (UMS), MSc. (Imperial), PhD (Nottingham)
Discrete Optimization, Operations Research, Machine Learning

087-503000 ext. 101234

slgoh@ums.edu.my

ASSOC. PROF. DR. SYED NASIRIN BIN SYED ZAINOL ABIDIN
Associate Professor

BBA (ITM), MBA (Ohio), PhD (Bath)
Pg. Cert. Teaching Learning (Brunel)
Decision Support Systems (DSS), Systems Implementation, Discrete-event Simulation (DES), Grounded Theory

087-503000 ext. 102930

snasirin@ums.edu.my

DR. NOORALISA BINTI MOHD TUAH
Senior Lecturer

BIT (Hons) (UUM), Msc Web Based and Database System (Salford, UK), PhD Comp Sc (Southampton, UK)
Serious Games, Gamification, Human Computer Interaction, Digital Healthcare/Learning

087-503000 ext. 101495

alisa.tuah@ums.edu.my

MEET OUR INTELLECTUAL POWER

UH648104
BUSINESS COMPUTING

DR. DINNA @ NINA BT MOHD NIZAM
Senior Lecturer

BIT (UMS), MElecCom (Wollongong), PhD (Leicester)
Digital Educational Games or Game-based, Learning, Eye Tracking Analysis, Human Computer Interaction (Children), User Experience and Engagement

087-503000 ext. 100867

dinna@ums.edu.my

DR. ESMADI ABU BIN ABU SEMAN
Senior Lecturer

BIT (Hons) System Sc & Management (UKM), MSc Data Telecommunications & Networks (Salford), PhD IS (UKM)
Descriptive Research & Action Research, Questionnaire Design, Business Feasibility Analysis, Business Model/Business Plan Development

087-503000 ext. 100713

esmadi@ums.edu.my

DR. JACKEL CHEW VUI LUNG
Senior Lecturer

BSc (Hons), PhD (UMS)
Numerical Analysis, Statistical Modeling, Statistical Analysis

087-503000 ext. 104305

jackelchew93@ums.edu.my

MEET OUR INTELLECTUAL POWER

UH6481004
BUSINESS COMPUTING

DR. TAMRIN BIN AMBOALA
Senior Lecturer

B. Socio-Cultural and IT (Hons) (Malaya), MIT (Malaya), PhD BIS (RMIT)
Business Process Reengineering, Business Process Management, Sharia Compliant E-Commerce Transaction

087-503000 ext. 101397

tamrin@ums.edu.my

TS. HADZARIAH BINTI ISMAIL
Lecturer / Professional Technologist

BSc (Hons) (South Bank), MSc (UM)
Software Engineering, Requirements Engineering, Knowledge Management

087-503000 ext. 101224

had@ums.edu.my

IZA AZURA AHMAD BAHAR
Lecturer

BA (Hons) Management (USM), MSc IS (Brunel, UK)
Decision Support Systems (DSS), Systems Implementation, Discrete-event Simulation (DES) , Grounded Theory

087-503000 ext. 103471

izabahar@ums.edu.my

MEET OUR INTELLECTUAL POWER

UH6481004
BUSINESS COMPUTING

SOFFRI BIN YUSSOF
Senior Lecturer

BSc (Computer) (Hons) (UTM), MSc (IT Management) (UTM)
Strategic Innovation, Information System, Open Innovation

087-503000 ext. 101760

soffri@ums.edu.my

NONA MASNIE BTE MOHD. NISTAH
Lecturer

BCom-Ecom & Mgt (Deakin), ME-Com (Deakin)
MDec e-Usahawan Trainer Pro. Cert, MSCE Pro. Cert
E-Commerce Business Model, Digital Marketing, Digital Entrepreneurship, Fintech Security

087-503000 ext. 101768

nona@ums.edu.my

DG. SENANDONG BINTI AJOR
Lecturer

B.MIS (IIUM), MSc (Knowledge Discovery dan Data Mining (East Anglia)
Data Mining, Predictive Modeling Technique, Digital Tourism

087-503000 ext. 101416

dyg_ajor@ums.edu.my

MEET OUR INTELLECTUAL POWER

UH6481004
BUSINESS COMPUTING

AINNUR HAFIZAH BINTI ANUAR MOKHTAR
Lecturer

BSc (Hons) IS (UiTM), M. Office Management System (UiTM)
Cybersecurity, Data Security, Information Security

087-503000 ext. 102648

ain_146@ums.edu.my

MEET OUR INTELLECTUAL POWER

UH6481005
DATA SCIENCE

ASSOC. PROF. DR. AZALI BIN SAUDI
Head of Program / *Associate Professor*

BSc. Comp. Sc. (UKM), MSc. AI (Edinburgh), PhD (UMS)
Computational Mathematics, Intelligent Robotics, Computer Vision, AI, Swarm Intelligence, Evolutionary Computation

088-320000 ext. 100454

azali@ums.edu.my

PROFESSOR DR. JASON TEO TZE WI
Professor / Senior Member, IEEE

Bcomp Math (Western Australia), M.Info.Tech (Charles Stuart), DIP Info. Tech (New South Wales)
Evolutionary Computing, Artificial Life, Multi-objective Optimization, Affective Computing

088-320000 ext. 101040

jtwteo@ums.edu.my

ASSOC. PROF. TS. DR. MOHD HANAFI BIN AHMAD HIJAZI
Associate Professor / Professional Technologist

BSc (Compr. Sc.), MSc. (UTM), PhD (Liverpool)
Data Mining, Artificial Intelligence, Machine Learning

088-320000 ext. 100818

hanafi@ums.edu.my

MEET OUR INTELLECTUAL POWER

UH6481005
DATA SCIENCE

PROFESSOR TS. DR. RAYNER ALFRED

Professor / Professional Technologist

BSc (Hons) (Brooklyn, USA), MSc. Comp. Sc. (Western Michigan, USA), PhD in Comp. Sc. (York)
Big Data Analytics, Information Retrieval and Text Mining, Artificial Intelligence, Machine Learning and Knowledge Discovery

088-320000 ext. 100454

ralfred@ums.edu.my

DR. ERVIN GUBIN MOUNG

Senior Lecturer

BEng (Hons), MEng, PhD Computer Engineering (UMS)
Object Detection, Deep Learning/Machine Learning, Reinforce Learning, Image Processing

088-320000 ext. 100270

nordin@ums.edu.my

DR. SEYED HAMID TALEBIAN

Senior Lecturer

PhD (Malaya)
Data Science, Data Mining, Machine Learning, Deep Leaning, Natural Language Processing

088-320000 ext. 105145

talebian@ums.edu.my

MEET OUR INTELLECTUAL POWER

UH6481005
DATA SCIENCE

DR. HJH FARASHAZILLAH BINTI YAHYA
Senior Lecturer

BSc, MSc (UiTM), PhD Comp. Sc. (Southampton)
Data Analytics, Data Management, Digital Technology, Cloud Security

088-320000 ext. 104253

fara.yahya@ums.edu.my

DR. LAI PO HUNG
Senior Lecturer

BSc (Hons), PhD (UMS)
Text Mining, Natural Language Processing, Data Mining, Optimization

088-320000 ext. 104113

laipohung@ums.edu.my

TS. DR. RAYNER @ HENRY PAILUS
Senior Lecturer

BSc (Hons) Comp Sc (Philadelphia, USA), Mphil, PhD (Comp. Sc.) (UMS)
Artificial Intelligence - Face Recognition, Computer Audio, Vision Profiling, Data Science, Machine Learning, Subspace Data Mining, Deep Learning - Multiple Analytic Decision

088-320000 ext. 105063

rayner.pailus@ums.edu.my

MEET OUR INTELLECTUAL POWER

UH6481005
DATA SCIENCE

DR. MOHAMMED AHMED MOHAMMED SALEH
Senior Lecturer

BSE (Hons), MSc., PhD (UiTM)
Information Security, Image Processing and Computer Vision, AI, Distributed Ledger Technology

088-320000 ext. 105102

mohammed.ahmed@ums.edu.my

GARIS PANDUAN BEBAN STAF AKADEMIK (BSA)

FAKULTI KOMPUTERAN DAN INFORMATIK, UNIVERSITI MALAYSIA SABAH

1.0 TUJUAN

1.1 Garis panduan ini disediakan untuk membantu kakitangan akademik membuat kiraan Beban Staf Akademik (BSA) di Fakulti Komputeran dan Informatik (FKI)

1.2 Kaedah yang jelas dalam pengiraan BSA FKI perlu ditetapkan sebagai asas untuk menentukan kelayakan agihan pensyarah sambilan, tutor sambilan, dan demonstrator sambilan. Oleh itu, satu dasar perlu disediakan sebagai panduan dalam membuat keputusan mengenai agihan pensyarah sambilan, tutor sambilan, dan demonstrator sambilan.

1.3 Pembangunan garis panduan BSA juga merujuk kepada Garis Panduan Beban Staf Akademik yang ditetapkan oleh Kod Amalan Akreditasi Program (COPPA) yang dikeluarkan oleh Agensi Kelayakan Malaysia (MQA).

2.0 LATAR BELAKANG

2.1 Garis Panduan Beban Staf Akademik yang ditetapkan oleh Kod Amalan Akreditasi Program (COPPA) yang dikeluarkan oleh Agensi Kelayakan Malaysia (MQA) menggariskan bahawa jumlah maksimum kursus yang boleh diajar oleh satu staf akademik adalah **EMPAT(4)** kursus (dengan anggaran 3 kredit bagi setiap kursus). Nisbah staf akademik : pelajar bagi bidang komputeran adalah 1:15.

2.2 Dengan mengambil kira ketetapan ini, fakulti telah menyusun garis panduan untuk menyelaraskan beban akademik staf dan kelayakan permohonan demonstrator/tutor untuk pengajaran.

2.3 Terdapat dua kategori demonstrator, iaitu demonstrator yang diberi bayaran dan demonstrator yang tidak diberi bayaran.

2.4 Demonstrator yang tidak diberi bayaran adalah pelajar pascasiswazah yang mendapat manfaat daripada Skim Bantuan Pascasiswazah (SBP) (Rujuk: Garis Panduan Skim Bantuan Pascasiswazah, Universiti Malaysia Sabah). SBP menawarkan dua skim, iaitu Skim Pembantu Pengajar (SPP) dan Skim Yuran Pengajian Antarabangsa (SYPA)

2.5 Bagi SPP, tempoh maksimum bekerja sebagai pembantu pengajar di FKI adalah **ENAM(6)** jam seminggu.

2.6 Bagi SYPA, tempoh maksimum bekerja sebagai pembantu pengajar di FKI adalah **EMPAT(4)** jam seminggu.

2.7 Garis Panduan Beban Staf Akademik untuk penyeliaan pelajar pascasiswazah yang yang ditetapkan oleh standard komputeran dikeluarkan oleh Agensi Kelayakan Malaysia (MQA) menggariskan bahawa jumlah maksimum penyeliaan pelajar pascasiswazah yang boleh diselia oleh satu staf akademik adalah **LIMA BELAS (15)** orang, tertakluk dengan;

- Nisbah pensyarah sebagai **Penyelia Utama** adalah **1:7** untuk pelajar master dan doktoral secara penyelidikan dan mod campuran.
- Nisbah pensyarah dan pelajar untuk master secara kerja kursus (projek dan dissertasi supervision) adalah 1:10.

3.0 PENGIRAAN BEBAN TUGAS AKADEMIK

3.1 Pengiraan jumlah beban akademik berdasarkan kursus

1 kursus = 14 minggu & 2 Jam Kuliah + 1 Jam Tutorial / 2 Jam Amali

1 sesi tutorial = 1 jam (maksima 50 pelajar/sesi)

1 sesi amali = 2 jam (maksima 50 pelajar/sesi)

a) **Pengiraan jumlah beban bagi staf akademik**

Maksima **EMPAT(4)** Kursus atau **DUA BELAS(12)** Jam kredit

(Tempoh pengajaran setiap kursus adalah selama 14 minggu di mana 2 Jam Kuliah + 1 Jam Tutorial / 2 Jam Amali setiap minggu)

b) **Pengiraan jumlah beban bagi staf akademik dan jawatan pentadbiran utama**

i. *Bagi lantikan VC/TNC (Dekan/Pengarah, Timbalan Dekan/Timbalan Pengarah/Ketua Program)*

Maksima **DUA(2)** kursus atau **ENAM(6)** Jam kredit

(Tempoh pengajaran setiap kursus adalah selama 14 minggu di mana 2 Jam Kuliah + 1 Jam Tutorial / 2 Jam Amali setiap minggu)

ii. *Bagi lantikan Dekan (Penyelaras Wakil Fakulti)*

Maksima **TIGA(3)** kursus atau **SEMBILAN(9)** Jam kredit

(Tempoh pengajaran setiap kursus adalah selama 14 minggu di mana 2 Jam Kuliah + 1 Jam Tutorial / 2 Jam Amali setiap minggu)

3.2 Pengambilan demonstrator harus memberi keutamaan kepada demonstrator tidak berbayar (SBP) sebelum mengambil demonstrator berbayar.

3.5 Pengajaran tambahan (oleh pensyarah industri) sangat digalakkan namun perlu dirancang dengan teliti untuk memastikan tidak memberi kesan negatif kepada kualiti pengajaran dan pembelajaran (PdP).

3.6 Jemputan kepada pensyarah dalam bidang kepakaran yang tidak ada di FKI juga dibenarkan tetapi tertakluk kepada kelulusan Jawatankuasa Akademik FKI.

3.7 Kelulusan permohonan untuk pensyarah sambilan, tutor sambilan, dan demonstrator sambilan bergantung kepada persetujuan Jawatankuasa Akademik FKI.

3.8 Pengisian Unit Beban Kerja (UBK) bagi pensyarah dilakukan sepanjang tahun pengajaran dan pembelajaran (PdP), iaitu semester 1, semester 2, dan semester pendek (jika ada).

3.9 Pengisian Unit Beban Kerja (UBK) tidak dikenakan bagi PdP yang mendapat bayaran.

FACULTY OF COMPUTING & INFORMATICS

COHORT 2019

FINAL YEAR PROJECT (FYP) GUIDELINES

PROGRAM

PROGRAM NETWORK ENGINEERING
PROGRAM SOFTWARE ENGINEERING
PROGRAM DATA SCIENCE

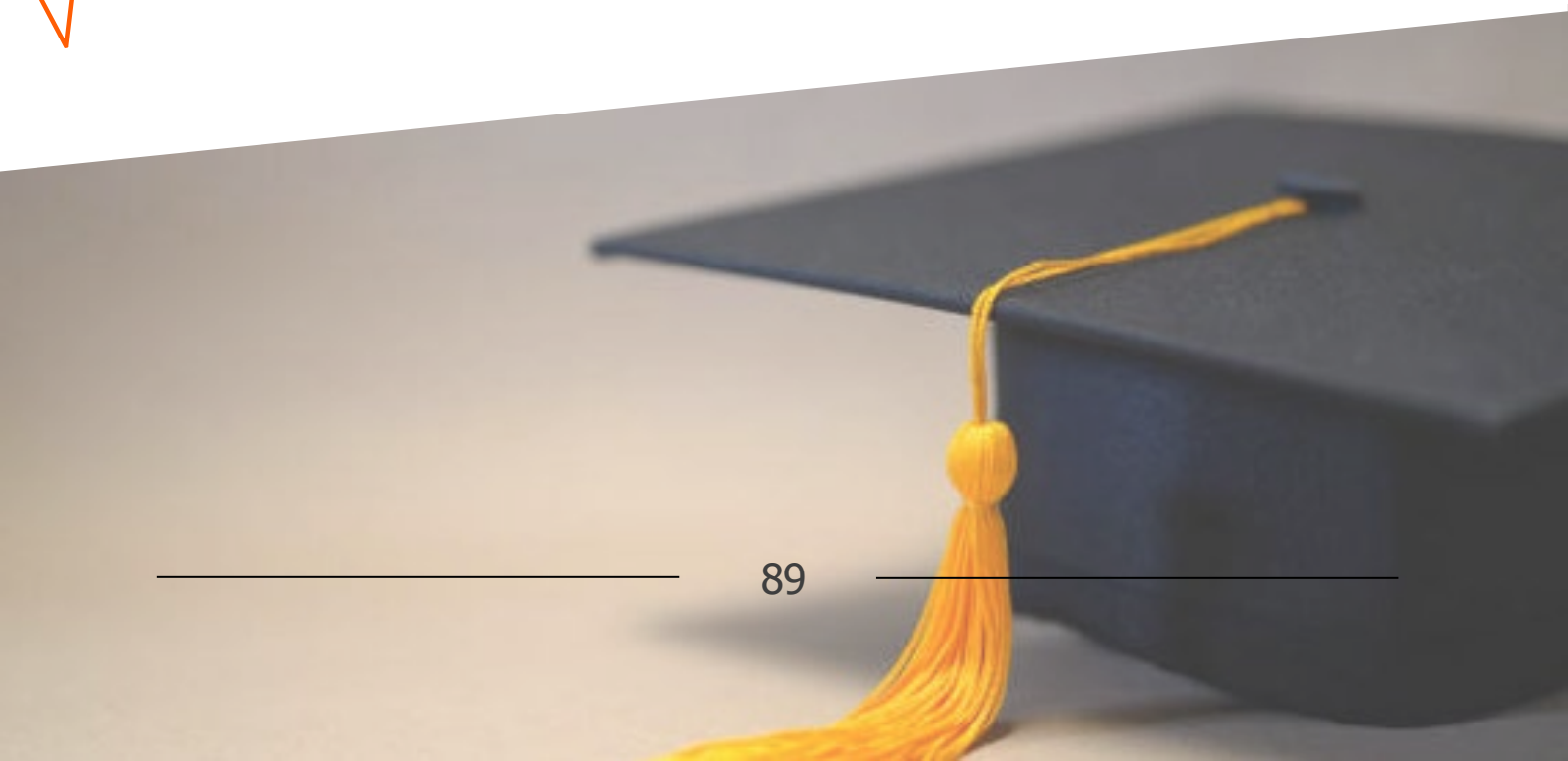
PREAMBLE

The Final Year Project Report Handbook was created to assist students in completing the Final Year Project (FYP) Thesis as partial fulfilment for the Degree of Bachelor of Computer Science with Honours from the Networking Engineering, Software Engineering and Data Science programs, Faculty of Computing and Informatics, Universiti Malaysia Sabah.

The handbook is intended to guide students in developing final year projects. The two-semester, final year project: Project I and Project II will be one of the most important parts of undergraduate studies. It will also be one of the most time-consuming, taking up a total of 6 credit hours over a two-semester.

We hope that this handbook will be the most faithful companion for students during the FYP Project I and Project II. Students are responsible for preparing the report in the prescribed format and submitting it on time. Remember to adequately mention any work that is not your own by using the correct citations and reference format following the guidelines in this handbook.

All the best!



CONTENTS

INTRO

IMPLEMENTATION AND PROCEDURE

1.1 INTRODUCTION

In partial fulfilment of the award of a Bachelor's Degree in Computer Science with Honors from the Faculty of Computing and Informatics, Universiti Malaysia Sabah, each student must complete and pass Final Year Project (FYP) before proceeding with industrial training.

FYP is usually carried out in two semesters: FYP Project I (3 credit hours) during the sixth semester and FYP Project II (3 credit hours) during the seventh semester.

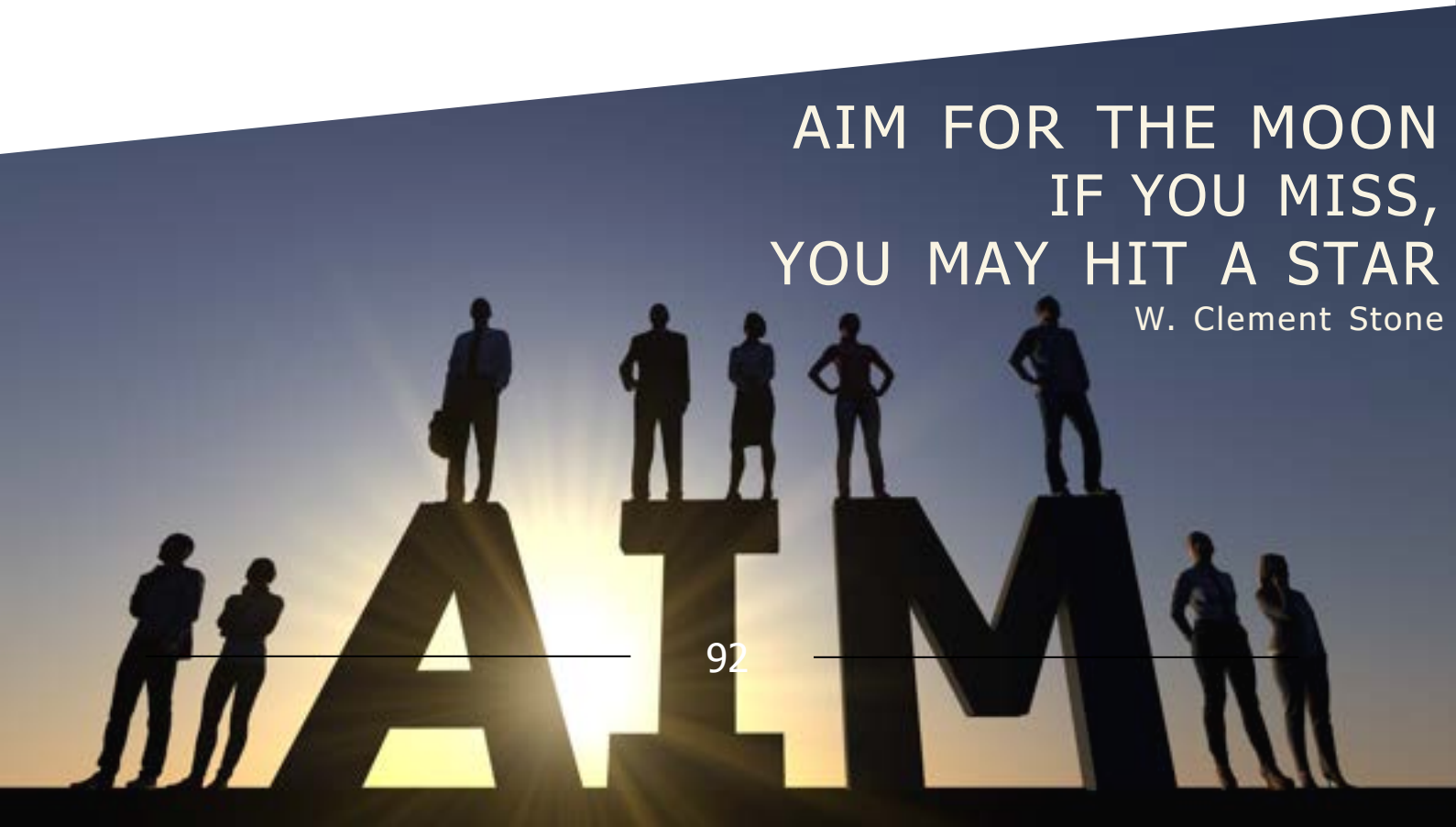
For enrolling in FYP Project I, a project proposal must be prepared. Subsequently, for Project I and Project II, the thesis must be produced in accordance with the Faculty's thesis writing guidelines and submitted to the Faculty on the prescribed dates.

This handbook is intended to support students in the efficient preparation and implementation of their FYP project and should be referred by all parties engaged in FYP at the faculty level, particularly the students, supervisors and examiners.

2 AIM

Enhance students' knowledge and skills to solve real-world problems scientifically and systematically, train ICT talents and future professionals according to the professional and ethical practices in computer Science and be competent in fulfilling Program Learning Outcomes (PLO).

FYP aims to train students to apply the learnt theoretical principles and knowledge of computer science, programming skills and experience gained during undergraduate studies in order to produce skilled and competent ICT undergraduates. This goal should be achieved through practical product development or experimental research project, demonstrating project deliverables in report writing and oral presentation in a precise and coherent manner.



3 COURSE LEARNING OUTCOMES

PROJECT I :

CLO1 Formulate the project problem statements and objectives to address the real-world problems by applying learnt theoretical principles and knowledge of computer science. (C6, PLO1)

CLO2 Design a system/experimental to meet a specified goal(C6, PLO6)

CLO3 Display personal responsibility by working independently or in a group and in a professional manner.(A5, PLO4)

CLO4 Demonstrate project ideas and deliverables in structured oral presentations and written technical reports. (A3, PLO5)

CLO5 Propose a practical solution based on the surveyed literature of the chosen area of study in an organized way. (A5, PLO7)

3 COURSE LEARNING OUTCOMES (CONT.)

PROJECT II:

CLO1 Build a system/experiment based on user/research/industrial requirements to meet a specified goal and defined methodology (P7, PLO2)

CLO2 Evaluate the performance of the developed project according to professional practices (C5, PLO6)

CLO3 Perform the project implementation that align with the professional and ethical practices in computer science (A5, PLO4)

CLO4 Demonstrate a commitment to continue in professional project development and possess entrepreneurial skills (A3, PLO8)

Propose future works based on the analyzed project findings and constraints (A5, PLO7)

4 FYP STRUCTURE

Final year projects allow students to put into practice the knowledge and skills that they have acquired throughout the computer science program. The Final Year Project for the computer science programme is a one-year independent study under the supervision of faculty members, composed of Project I and Project II as summarized in Table 1.

Project I focuses on the ability of students to apply knowledge of computer science appropriate to meet the desired needs within realistic constraints or solve the industrial problem. The student is required to plan the project activities to fulfil the proposed project problems and objectives, analyze and discuss the project requirements, and design the project using appropriate techniques or tools. The student is compulsory to meet regularly with the supervisor, present their progress and submit the writing thesis.

Table 1 . 1 :FYP Course Name and Course Code for Network Engineering, Software Engineering and Data Science Programs

Course Name	Network Engineering	Software Engineering	Data Science
Project I	KP34203	KK34203	KD34603
Project II	KP44703	KK44703	KD44303

"Humility is the first step towards learning. You can't learn until you are humble enough to realize there is something for you to learn"

5 ROLES AND RESPONSIBILITIES

Management and implementation of FYP are the students' responsibilities under the supervision of a supervisor, which begin from the date of FYP enrolling until the bounded thesis is delivered. The FYP implementation must be guided by the supervisor in accordance with the approved project title, objectives and scope. The student is responsible for understanding in detail, the tasks, responsibilities and deadlines of FYP implementation. Last minutes of work and seeking appointment or approval with Supervisor or Coordinator may resulted the debarred of continuing FYP.

In order to produce an FYP that meets the specified conditions, the student must perform the following responsibilities:

- Find a supervisor and arrange a series of discussion meetings to prepare the project proposal.
- Ensure that the FYP Project is original (either a new project or an extension of a previously conducted project). Plagiarism is prohibited!
- Submit the project proposal approved by the supervisor via the Easychair system before the closing date set by faculty.
- Register the approved project title at the FYP system before the deadline set by the Faculty.
- Enrol the FYP Project I and Project II courses before the closing date set by the University.
- Meet regularly with the supervisor with a minimum of FIVE (5) meetings per semester to discuss matters pertaining to FYP.
- Submit the meeting logs for the supervisor's approval via the FYP system within ONE(1) week after the meeting is conducted.
- Adhere to the FYP work schedule set by faculty. Prepare and submit all assessment items (Project Proposal, Progress Report, Final Report, Article Summary, Thesis) in accordance with the prescribed time and format set by the Faculty.
- Participante in the organized FYP workshops/seminars/webinars/competition.

Make an Effort NOT an Excuse

SUPERVISOR IS

responsible for supervising, guiding, advising and providing directions in completing the implementation of FYP Projects according to faculty professional and ethical practices

SUPERVISOR IS NOT

- supposed to arrange the discussion meetings
- supposed to plan the timeline for your implementation
- supposed to teach and solve your programming problems
- supposed to remind you about the due dates submitting project reports.

6 PROJECT TYPE

For FYP projects, students might choose from one of the following categories:

Full Research Based Project

A detailed study/investigation into specific problems, concerns, or issues using the scientific method.

Project Scope:

- Undergraduate level research by applying the established theories/algorithms/scheme/approach/technique/framework to a body of knowledge of computer science, especially data science, network engineering and software engineering fields.
- Must include experimental design

Project Nature:

- Technological Applied Research
- Scientific Applied Research
- Fundamental/Basic Research
- Excluding: Survey, Case Studies, Secondary article analysis.

1.6 PROJECT TYPE(CONT.)

Product Development Based Project

Computer software/application and multimedia product/application program designed to perform a specific function directly for an end-user or, in some cases for another application.

Project Scope:

- DFD level 0 involves at least EIGHT (8) processes/DFD level 0 involves at least EIGHT (8) processes or UML included at least Structure Diagram (class/object diagram), behaviour diagram (use case/activity diagram) and Interaction Diagram (Sequence Diagram)
- At least EIGHT (8) modules (CRUD operations) excluding user registration, login/logout, forgot password.
- At least EIGHT (8) relations/tables for database design
- At least ONE(1) WOW factor solution/function/module to solve a real-problem

Project Nature:

- Web Application Development
- Mobile Application Development
- IoT Mobile/Web Application
- Standalone Computer Software/Program

6 PROJECT TYPE (CONT.)

Industry-based Product

Real-world industrial problems identified by industrial partners. Project deliverables should be a prototype, web application, mobile application, computer program, software or research output.

Project Scope:

- Product development refers to the project scope of product based project
- Full research based project refers to the project scope of full research based project.

Project Nature:

- Product development refers to the project nature of product based project
- Full research based project refer to the project nature of full research based project

If the plan doesn't work, change the plan but never the goal!

7 AREA OF WORK

The FYP project will normally be in an area of work that emphasizes the software infrastructure associated with computer systems. Possible topic areas include, but are not limited to:

- development of existing systems;
- algorithms library developments;
- software implementation on limited resource devices;
- development of secure systems;
- Internet and web services and applications;
- applied AI techniques.
- distributed computing paradigms;
- mobile services and application;
- wireless network;
- network simulator;
- Internet of Things Applications, Raspberry Pi or arduino

Even though these topics cover different areas, the work involved includes:

- Identify a problem area (i.e. project topic) and the main objectives of the project.
- Submit a proposal articulating clearly the aims, objectives and methodology of the project.
- Research and/or analyze the project area to gain an understanding of the work involved
- Design, implement and test a solution if appropriate.
- Write a thesis that clearly documents the project and, if appropriate, how each of the above stages was carried out.
- Present the project and demo the product/ experimental implementation

2.1 SUPERVISOR AND PROJECT TOPIC REQUISITION

The student should take the following steps in finding a potential supervisor and acquiring an appropriate project topic:

STEP 1: IDENTIFY AN AREA OF INTERESTS

The first step in the final year project process is choosing an area of interest. Computer science projects can be diverse, and therefore, it may start to narrow your interests to find a specific topic to focus on. Determining a project topic and scope can be daunting at first, but it is a great opportunity to explore your personal interests and get motivated for your project. Alternatively, students may refer to the faculty research group area for determining the project area, summarized in Table 2.1.

It is essential that students pick a project that they enjoy and are capable of doing.

Table 2.1 : List of Lecturers by Research Area

Research Group	Academic Staff (Listed by Alphabet)
Advanced Machine Intelligence	Farashazillah Yahya, Dr Florence Sia, Dr James Mountstephens, Dr Jason Teo , Prof. Dr. Joe Henry Obit, Assoc. Prof. Dr Ng Giap Weng, Assoc. Prof. Dr Rayner Alfred, Assoc. Prof. Dr
Cybersecurity	Dr Adnan Akhunzada Dr. Ayman Khallel Ibrahim Dr Leau Yu Beng Ms Nordaliela Mohd Rusli (Study Leave) Dr Salmah Binti Fattah Dr Tan Soo Fun
Data Technologies & Application	Chin Kim On, Assoc. Prof. Dr Chin Pei Yee, Dr Ervin Gubin Moung, Dr Mohd Hanafi Ahmad Hijazi, Assoc. Prof. Dr.
User Experience	Ag. Asri Ag. Ibrahim, Assoc. Prof. Dr. Aslina Baharum, Dr
Language Engineering & Application Development	Azali Saudi, Assoc. Prof. Dr Lai Po Hung, Dr Mohd Shamrie Sainin, Dr Norazlina Khamis, Dr Nordin Saad Norhayati Daut (Study Leave) Shaliza Hayati A. Wahab Suraya Alias,Dr

2.1 SUPERVISOR AND PROJECT TOPIC REQUISITION(CONT.)

STEP 2: FIND AND APPROACH POTENTIAL SUPERVISOR POLITELY

When you are approaching a potential supervisor, it is a good idea to write a proper email to a potential supervisor to discuss your area of interest and whether they would be interested in supervising you.
Before you contact a potential supervisor, you should be prepared to do your research on their area, becoming familiar with their work and academic specialisms (if you aren't already). Supervisors will have their own academic profile page, either on the faculty Research group site (http://fki.ums.edu.my/fki/research-grp/). These sites are good resources to find out about their work, projects, and research interests in their own words. They'll usually mention whether they're currently accepting supervisees – and what academic areas/projects they're keen to supervise in. A proper approaching email should include:

- A clear subject title

Ensure your initial email doesn't have a vague subject line that could lead to it being ignored (or heading straight for the spam folder). Some examples could be 'Prospective Cohort 2019 FYP students interested in Computer Science ' or 'Enquiry for Cohort 2019 FYP Supervision'.

- Introduce yourself properly

The introduction should introduce yourself and your background, including your current level of study and any experience. You should also establish your interest in studying a topic or area under the supervision of the academic. It may be useful to briefly explain why you are interested, or how you discovered the supervisor, which can be a good way of building rapport with them. Plus, you can introduce your funding status or your intention to secure funding.

- Explain your intent and interests

Summarize the area of your interest, project ideas that you proposed. It is vital that the email is kept as brief, targeted, specific and polite as possible. Try to avoid passive or hesitant statements. Supervisors are very busy, and if they find any reason why this email is not relevant it can be ignored.

- Appreciate and thank potential supervisors for their time

Ending your email by thanking and appreciating the potential supervisor for their time is a polite way to show respect.

Have patience and don't approach the potential supervisors at the last minute!
Simply copy-pasting an email and sending it to multiple potential supervisors isn't a good idea!
Supervisors can have hectic schedules and may not be able to reply to every email in good time. If there is no reply after one or two weeks, it may be worth sending an additional polite reminder email. Try to avoid badgering your favoured supervisor with numerous follow-up emails, as this could give a negative impression.

21 1 SUPERVISOR AND PROJECT TOPIC REQUISITION(CONT.)

STEP 3: DISCUSSION WITH THE RESPECTIVE SUPERVISOR

Often, emails to the potential supervisor will lead to a request for a meeting.

If not, students should take initiative to request and arrange an appointment with a supervisor. The discussion meeting should be arranged as earlier as possible to avoid the last minute's proposal writing.

This could be in person or via a meeting platform like Google Meet, Microsoft Teams or Webex, or messaging platforms like Whatapps or Wechat. This is a good sign – the supervisor is interested in you as a candidate and may want to find out more about you or explain more in person.

You now have an opportunity to discuss your interests, ask questions, and meet your potential supervisor to see if they are compatible with you.

Before the meeting, ensure you are some project ideas or areas to focus on. Avoid attending the meeting without any preparation!

Finally, make a good first impression. Be polite, humble, interested, interesting and dress professionally.

22 2 PROPOSALWRITING AND SUBMISSION

The purpose of the project proposal is to establish exactly what is to be achieved by the project and to establish a plan to do this. It should be regarded as a sort of contract between you and your supervisor.

- After deciding on the project title and a supervisor, the proposal for the project should be submitted before the closing date set by the Faculty.
- Each student should prepare an individual proposal. The group project is acceptable, however, each team member must submit a single proposal, that clearly identifies the proposed contributions of each individual member of the group to the overall group project. The project aim, objectives, scope, methodology and modules/functions/experiment of each member should be differentiated clearly.
- The proposal should adhere to the template and contents given as attached in Appendix A FYP Proposal Template.
- Each student must submit the proposal for plagiarism checking, and the similarity/plagiarism percentage should NOT be MORE THAN 30%. Otherwise, the submitted proposal will be considered as a Plagiarism case. The generated plagiarism report should be attached to the Appendix of your proposal.
- Before submitting to the Easychair Conference system to review your proposal, the Proposal MUST GET Approval and Signature from the Supervisor.
- The EasyChair Proposal Submission guidelines can be referred to Appendix B EasyChair Proposal Submission Guidelines.
- Please register a UMS Turnitin Account (https://www.turnitin.com/login_page.asp) and enrol into :

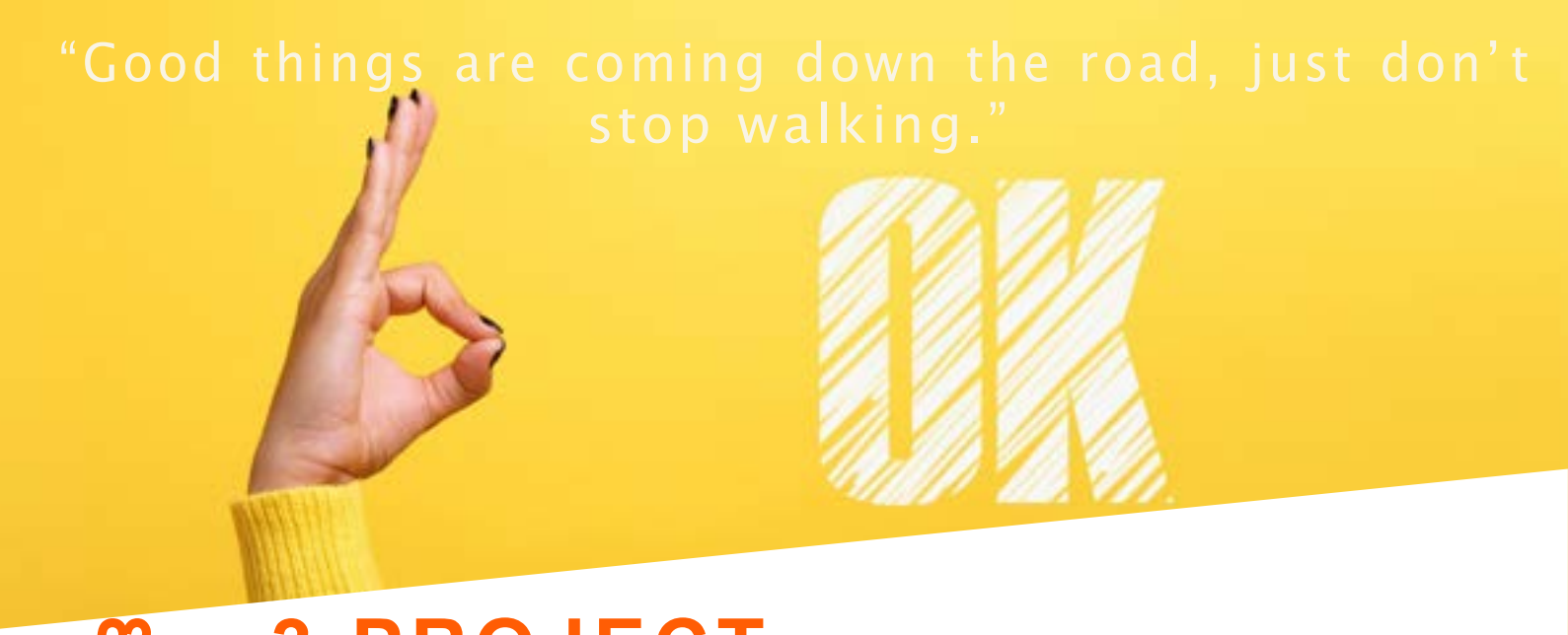
  Class ID: 33211529

  Enrollment Key: fyp2019

  Class Name: FYP Cohort 2019

  Assignment: Proposal Writing

"Good things are coming down the road, just don't stop walking."



23 3 PROJECT REGISTRATION

A) PROJECT I ENROLLMENT

- FYP Project I is registered in semester 6 (Third year, Semester 2) via SMPB System (https://smp.ums.edu.my/)
- In this semester, students should complete the first stage of the final year project section consisting of Introduction, Literature Review, Methodology, System/Research Analysis design, Preliminary implementation/experimental of the registered project.
- Without the supervisor and approval of the project proposal, the student cannot proceed to Project I at Week 1. Students who are enrolled on Project I without a supervisor and approval proposal are advised to drop Project I before Week 3, otherwise, it will result in a grade "F" for Project I.
- The change of pro
- Without submitting and presenting the progress and final report, students will get a grade of "F" in Project I.

B) PROJECT II ENROLLMENT

- FYP Project II is registered in semester 7 (Fourth year, Semester 1) via via SMPB System (https://smp.ums.edu.my/)
- FYP Project II is a continuation of the project from FYP Project I, thus, it shall be carried out upon completion of FYP I (obtained Grade D and above).
- In this semester, students should complete the final year project based on the defined Project objectives, Scopes and Methodology in Project I, and subsequently include the sections of implementation, testing and evaluation and conclusion of the registered project.
- Without submitting and presenting the progress and final report, students will get a grade of "F" in Project II.

C) PROJECT REGISTRATION AT FYP SYSTEM

- After the acceptance of the Proposal (notified by email), students need to a Login to FYP Account at the FYP site (http://webapps.ums.edu.my/fyp/) with their UMS email account and password and apply the given project code (by supervisor) BEFORE 18 MARCH 2022 (FRIDAY).

2.4 WORKSHOPS

Students must participate in workshops that are designed to train students to be able to implement final year projects and deliver project deliverables.
Details of the seminars are as follows:

- FYP Briefing

This workshop is designed to enable students to comprehend the implementation of the FYP project, rules and regulations, important dates and timelines.

- Proposal Writing

This workshop is designed to guide students to prepare their project proposal writing as per faculty formatting.

- Literature Review

This workshop is designed to introduce students to the typical structure of literature review and guide students to review relevant research/articles in order to establish a gap that the current study/system/product addresses.

- Methodology

This workshop is designed to introduce students to the systematic, theoretical analysis of the methods applied to implement a computer science final year project.

- System Analysis and Design

This workshop is designed to refresh the students on the system/experiment analysis and design methods and approaches.

25 5 PROJECT PERFORMANCE MONITORING

Students' ethics, professionalism, efforts and initiative include punctuality, attendance, promptness, responsibility, persistence integrity, commitments, motivation, self-direction and independent learning will be evaluated during Project I and Project II.

Following are the lists that need attention by students:

- It is COMPULSORY for each student to arrange a minimum of FIVE (5) meetings per semester to discuss and report the progress of the project to the supervisor.
- It is COMPULSORY for the students to submit the meeting logs as illustrated in Figure 2.1, for the supervisor's approval via the FYP system within ONE(1) week of the conducted meeting.
- It is COMPULSORY for the students to attach the printed/screenshot online meeting logs in the report appendices.
- Milestones/deliverables meetings outcomes should affect project marks set by supervisor and examiner at the time of project presentation.
- Failure to attend a minimum of FIVE (5) meetings per semester with the supervisor should be penalized. The student would not be allowed to present.
- The lists of Missing in Action (MIA) students will be reported for facultys' further action in Week 3, Week 5 and Week 8.

Figure 2.1 : Meeting Logs at FYP System

"Surround yourself with people who challenge you, teach you and push you to be your best self"
-Bill Gates

26 6 PROCESS FLOW AND MILESTONE

Figure 2.2 : Flow Chart pf Final Year Project

26 6 PROCESS FLOW AND MILESTONE(CONT.)

Table 2.2 : Important Dates of FYP Cohort 2019

Milestone /Timeline	WEEK	DATE
Kick start - FYP Briefing	❖ 8 Weeks	19 JAN 2022
Finding Supervisor /Idea generation	• 8 – 6 weeks	19 JAN – 18 FEB 2022
Proposal Preparation	❖ 6 – 2 Weeks	26 JAN – 27 FEB 2022
Proposal Submission (Easychair)	❖ 2 Weeks	28 FEB 2022
Proposal Review (Easychair)	❖ 2–1 Weeks	1 MAR – 11 MAR 2022
Result Released	• Week 1	14 MAR 2022
Proposal Revision and Resubmission **Applicable only for rejected Proposal	-	-
Revised Proposal Result Release	-	-
Project I Introduction (Problem & Objectives), Literature Review & Methodology	• Week 1–Week 6	14 MAR – 21 APR 2022
Progress Report Submission	• Week 6	22 APR 2022
Progress Presentation	• Week 7	25 – 29 APR2022
Project I SAD, Preliminary Implementation/Experiment	• Week 8 – Week 13	9 MAY – 16 JUN 2022
Project I Report Submission	• Week 13	17 JUN 2022
Project I Presentation	• Week 14	20 JUN – 24 JUN 2022
Project II	○ Week 1–Week 6	TBA
Project II Progress Report Submission	○ Week 6	TBA
Project II Progress Presentation	○ Week 7	TBA
Project II **Product Development, Testing and Evaluation	○ Week 8–Week 13	TBA
Project II Progress Report Submission	○ Week 13	TBA
Project II Progress Presentation	○ Week 14	TBA

27 7 REPORT SUBMISSION

During the course of FYP, students must perform the following to submit FYP Report before the closing date set by faculty:

- The report should be prepared based on the listed report contents in Table 2.3.
- The report submission MUST get approval from a supervisor before submitting it to SMARTV3 System.
- Don't put in a request at the last moment. A sufficient time of 1- 2 weeks should be given for the supervisor for reading and approve the report submission.
- Supervisors can have hectic schedules and may not be able to reply to every email in good time. If there is no reply after one or two weeks, it may be worth sending an additional polite reminder email. Try to avoid badgering your favoured supervisor with numerous follow-up emails, as this could give a negative impression.
- Print/Screenshot the submitted Online Meeting Logs from FYP Systems and attached in the report appendices.

In cases where there are no accepted mitigating circumstances, late submission of the FYP Report shall lead automatically to the imposition of a deduction of 5% per day until the pass mark for the assessment has been reached (35% for FYP project). For example, where a deadline is 17:00 on Friday, a 5% penalty shall be deducted at 17:01 on Saturday, and a subsequent 5% shall be deducted at 17:01 on Sunday.

Students who have a health problem during the FYP must apply to the Dean of the Faculty/Centre concerned to defer his/her report submission. The application must be submitted within the duration of FORTY-EIGHT (48) hours after the closing date set by the faculty. The application must be supported by a letter of acknowledgement from a Medical Officer of the University or a Government Hospital.

Table 2.3 : FYP Report Contents

Report Contents	Project I		Project II	
	Week 6 Progress Report	Week 13 Final Report	Week 6 Progress Report	Week 13 Final Report
Introduction, Problem Background, Problem Statement, Objectives, Project Scope	✓	✓	✓	✓
Literature Review	✓	✓	✓	✓
Methodology	✓	✓	✓	✓
System/Experimental Analysis and Design	N/A	✓	✓	✓
Preliminary Implementation/Experiment/Prototype	N/A	✓	N/A	N/A
Implementation	N/A	N/A	✓	✓
Preliminary Testing/Evaluation	N/A	N/A	✓	N/A
Testing and Evaluation	N/A	N/A	✓	✓
Conclusion	✓	✓	✓	✓
Attached Printed Online Meeting Logs in Appendices	✓	✓	✓	✓

28

8 PROJECT PRESENTATION AND EVALUATION

Each student MUST attend the scheduled presentation slot. The presentation slot can be accessed via the FYP System.

Be punctual, LATE or ABSENT from the assigned presentation slot will be NOT BE FURTHER RE-SCHEDULE and students will be graded as 'F'.

Students who have a health problem during the scheduled presentation slot must apply to the Dean of the Faculty/Centre concerned to defer his/her project presentation. The application must be submitted within the duration of FORTY-EIGHT (48) hours after the closing date set by the faculty. The application must be supported by a letter of acknowledgement from a Medical Officer of the University or a Government Hospital.

In cases where there are no accepted mitigating circumstances or an official extension has been granted, late presentation of the FYP (based on the scheduled presentation slot) shall lead automatically to the imposition of a deduction of 5% per day until the pass mark for the assessment has been reached (35% for FYP project). For example, where a presentation is scheduled at 14:00 on Monday, a 5% penalty shall be deducted at 14:01 on Tuesday, and a subsequent 5% shall be deducted at 14:01 on Wednesday.

For the Project I Presentation :

- 15 minutes presentation slot will be assigned to each submitted project report
- Students are advised to prepare 5 – 10 minutes presentation slides for the presentation. Please note that 15 minutes presentation is including the project demonstration and Q& A sessions.

For the Project II Presentation :

- 30 minutes presentation slot will be assigned to each submitted project report
- Students are required to (i) prepare 5 minutes presentation slides for the presentation and 15– 20 minutes for demonstrating the project implementation. Please note that 30 minutes presentation is including the project demonstration and Q& A sessions

Table 2.4 : FYP Presentation Contents

Presentation Week	Suggested Contents
Week 7 Project I Progress Presentation	Project Motivation, Problem Statements, Literature Review, Methodology, Conclusion
Week 14 Project I Presentation	Revision/Correction, System/Experimental Design, Preliminary implementation/experiment/prototype, conclusion
Week 7 Project II Progress Presentation	Revision/Corrections, Recap Project Objectives, Demo of developed product/implemented research, Preliminary Testing and Evaluation, Conclusion
System/Experimental Analysis and Design	Revision/Corrections, Recap Project Objectives, Demo of developed product/implemented research, testing and evaluation, conclusion

28 8 PROJECT PRESENTATION AND EVALUATION(CONT.)

FYP Evaluation and Assessment is conducted based on the student's accomplishment and ability in fulfilling the course learning outcome.

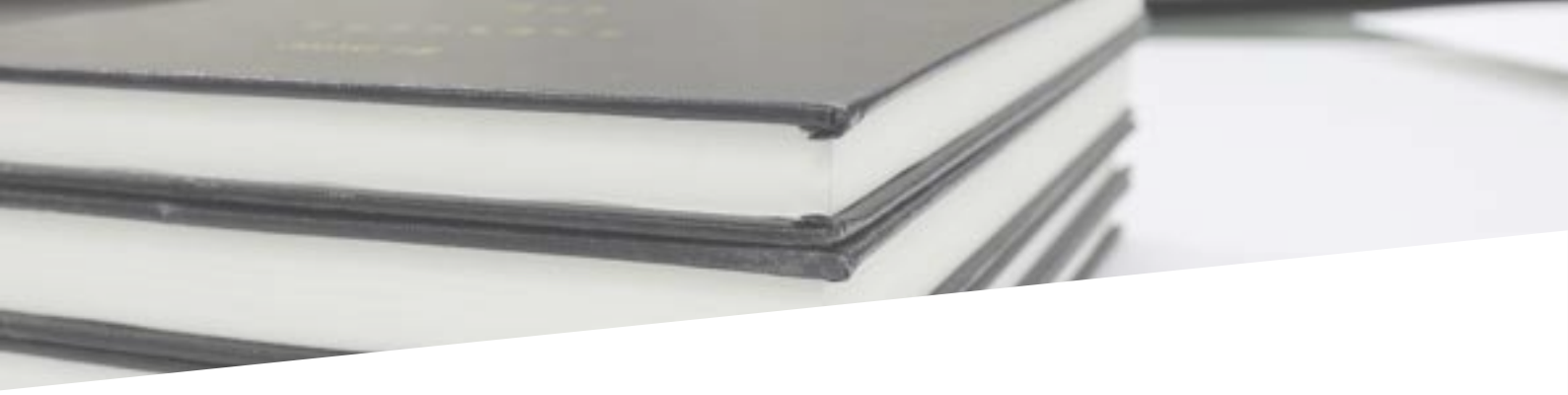
Students must take notes of the following to fulfil Passed Condition:

- Students who FAIL to submit their FYP proposal on the specified Deadline are not allowed to attend the scheduled presentation and will be given a fail grade, "F".
- Students who fail to submit their FYP report are not allowed to attend the viva and will be given a fail grade, "F".
- All objectives stated in the thesis must be achieved.
- Students with a plagiarized rate equal to or more than 30% or system will be given a fail grade "E".
- Students who fail to attend the scheduled presentation will be given a fail grade"F".
- During the presentation, students must achieve the required quality of work as stipulated by the examining panels.
- As FYP Project I and Project II are continuous, changing the title and objectives of the Final Year Project is disallowed. Therefore, the student is advised to conduct a feasibility study of the proposed project to consider the required technical skills, tools, and implementation timelines.
- Students must have sufficient academic discussion/ meetings with their supervisor at least FIVE(5) times in a semester.
- For every meeting with the respective supervisor, the student should fill in the meeting log to record what has been discussed and what the action plans are, subsequently attached in the Appendices of the report.
- Students must correct the thesis based on the examination panels comments and feedback.

The assessment marks distribution are summarized in Table 2.5. The detailed assessment rubrics can refer to Appendix C Project I Assessment Rubrics and Appendix D Project II Assessment Rubrics.

Table 2.5 : Assessment and Marks Distribution

Assessment	Academic Supervisor	Academic Examiner 1	Academic Examiner 2/Industry Examiner 2	TOTAL
Progress Assessment	15%	5%	5%	25%
Final Assessment	25%	25%	25%	75%
TOTAL	40%	30%	30%	100%



29 9 FINAL THESIS PREPARATION AND SUBMISSION

After presenting Project II at week 14, students must perform the following for preparing the final thesis submission:

Seek the permission from supervisor and examiners whether you can proceed to do thesis hardbound printing: (i) without correction or (ii) with correction – If so, you need to submit a revised/corrected copy of the final project report for re-checking before proceeding to do the Thesis Hardbound Printing.

- Proofread and correct the grammatical and spelling errors
- Prepare Thesis hardbound Print copy according to the Formatting specified in Appendix E and Gaya UMS Version 2020 exactly. Otherwise, the submission will be rejected.
- Fill thesis submission form (FYP/Thesis/001) and get the approval and signature from the supervisor and examiners. You need to attach the final thesis together with the form.

SOFT COPY SUBMISSION (COMPULSORY)

- To ensure the confidentiality of the project, each student will allocate a private folder to upload their submission.
- Please check your email for the shared folder link (after Project II Presentation) as below and click open to access the allocated folder.
- Rename all the file name with your matric no and upload:

(i) Signed thesis submission form (FYP/Thesis/001). Rename the file name as "Form_BI19XXXXXX" and upload the .Pdf format only

(ii) Thesis hardbound Print copy. Rename the file name as "Thesis_BI19XXXXX" and upload the .pdf format only

(iii) Article Summary: Rename the file name as "Article_BI19XXXXX" and upload the .pdf format only

(iv) Source Code: Rename the file name as "SC_BI17XXXXX" and upload the .zip or .rar format only.

The submission of the soft copy will be rejected for the following scenario:

- Incomplete Project Submission Form
- Incorrect Format of the Soft Copy Thesis
- Missing one of the following:

(i) Signed Hardbound Submission Form (pdf format only)

(ii) Thesis (pdf format only)

(iii) Article Summary (pdf format only)

(iv)Source Code: (.zip or .rar format only).

The failure of submitting the final thesis before the closing date set by the Faculty will result in the Failure Grade.

210 10 ARTICLE PREPARATION

Students must produce an article to summarize the FYP during Project II. The paper must be written in English, comply with the format prescribed by the faculty (refer to Appendix F Article Template), and consists of the following items:

(i) Abstract
(ii) Introduction
(iii) Methodology
(iv) Results and Discussion
(v) Conclusions
(vi) Reference

The article MUST be submitted to the Supervisor for assessment no later than Week 14 or the before the closing date set by the facutly.

2.11 BUDGET APPLICATION

Students can request financial assistance for implementing FYP Project. However, the approval is subjected to faculty approval.

The budget application MUST be prepared with the following guidelines:

- Find the quotation for the requested items
- Discuss with the supervisor and seek their advice before the application
- Justify the application of the requesting items and how it can sustain support for another faculty course.
- Prepare the proposal that complies with the format prescribed by the Faculty (refer to Appendix G Budget Application Template)
- Obtain the supervisor comments and signature before submitting to the FYP Coordinator.
- The application should submit before Week 7 Project I as the approval and purchasing process is a time-consuming process.

All items purchased under the faculty financial assistance belong to faculty assets. The purchasing process must follow the faculty guidelines.

The purchased items must register with the Faculty. The assets registration record must be forwarded to FYP Coordinators for the recording purpose.

Students are compulsory to return the purchased assets to the faculty after completing the FYP project.

Student and supervisor should be liable for any loss or damages to the purchased items.

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UMS

UNIVERSITI MALAYSIA SABAH

FACULTY OF COMPUTING & INFORMATICS

(F.T. LABUAN)

Guidelines for the Preparation and Submission of

Final Year Project

(Product Based – HC12)

Prepared by:
Dr Norbayah (Group Leader)
Ryan M. Andrias
Nuraini Jamil
Ainnecia Yoag
Rosni Zamudin

Checked by:

Table of Contents

1.0 INTRODUCTION

This document aims to guide final year undergraduate students of the Faculty of Computing & Informatics Labuan undertaking the Final Year Project process. It contains information on the stages of the project, indicating elements needed when choosing the product-based category, when reports are due, and most importantly how to write concise and legible documents with good literary style, presentation and layout. It is important to note that each report must be original. Remember irrelevant information and trivial statements are of no value. It is important not to underestimate the amount of time it takes to write the report.

1.1 Difficulties in Progressing Project

Your Supervisor must be the first person to contact if you have any difficulties or concerns about the way the Project is going. These difficulties or concerns should be raised when you meet your Supervisor and should be recorded in your logbook (on your own initiative) and should be highlighted in meetings with your appointed consultants. Normally these difficulties or concerns will be satisfactorily resolved by joint action by yourself and your Supervisor. If after following all the procedures, the difficulties or concerns remain unresolved you should contact the Head of Program for advice.

1.2 Plagiarism

We value originality and creativity in your work. The Final Year Project report is the work of the individual student. Plagiarism of any kind will not be tolerated. A Turnitin report must be submitted with the FYP report. More details on Turnitin is available in the Library.

1.3 Project Pre-Requisite Course

1.3.1 Pre- Requisite FYP 1

1. Video Production
2. Animation
3. Computer Graphic
4. Multimedia Project Management

5. Programming courses (Introduction to Computer Programming and Object Oriented Programming)

1.3.2 Pre- Requisite FYP 2

1. Final Year Project 1

2.0 PROJECT CRITERIA

Below are the proposed criteria for product-based category:

i. Proposed project should be based on 'product' where then final outcome either online application or small software system.
   - The prototype must be fully functioning based on the systems/applications analyzed in Literature Review Section.
   - Fulfilled ALL objectives in Introduction Section.

ii. Only **FIVE (5)** types of product will be considered for this project. (Refer to topic: scope project for the details of each types):
   - Animation
   - Interactive Application
   - Game
   - Video Production
   - Courseware

iii. In general, project must be based on the area of multimedia OR human computer interaction.

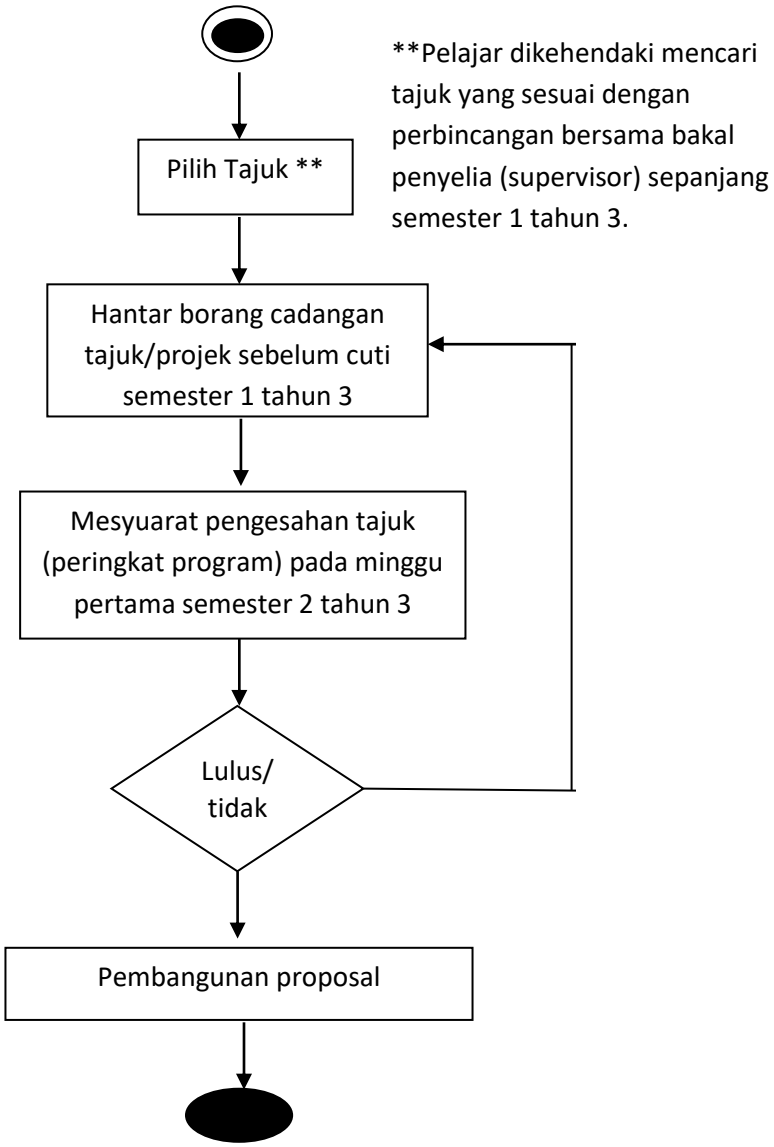
iv. Project can be done either in individual or in a group **(MAXIMUM 2 persons).**

v. Project is accepted **ONLY** in individual form.

vi. Selection of topics:
   - Student(s) are welcome to suggest any suitable project within the scope defined for the category **OR**
   - Choose a project suggested by Supervisor
   - However, project selection shall be based on the agreement of both Student and Supervisor.
   - Refer to the project specification process flow. (Figure 1.0)

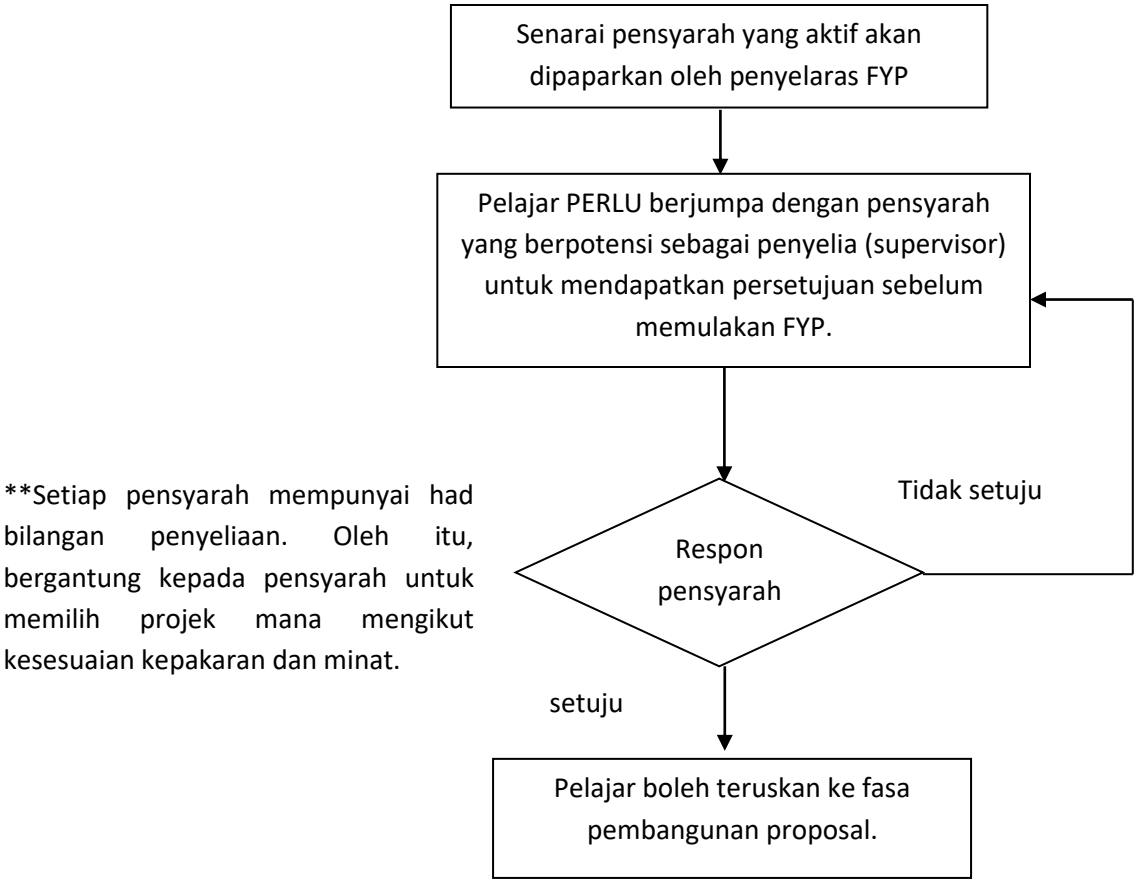
vii. Supervisor's determination:
   - Students are allowed to choose an available/active supervisor in the current semester. (list of supervisor will be posted)
   - Every supervisor has a quota of supervision depending on the ratio of number of students taking a final year project to the active lecturer.

- Students are advisable to meet and discuss with the potential supervisor to get the consent of the supervisory.
- However, the final supervisor's determination will be decided during proposal evaluation meeting at Program level.
- Refer to the supervisor's determination process flow. (Figure 2.0)



***Tajuk projek tidak boleh di tukar setelah disahkan. Namun, skop projek boleh berubah mengikut perbincangan dari semasa ke semasa.*

Figure 1.0 Project Specification Process Flow



**Setiap pensyarah mempunyai had bilangan penyeliaan. Oleh itu, bergantung kepada pensyarah untuk memilih projek mana mengikut kesesuaian kepakaran dan minat.

Figure 2.0 Supervisor's determination process flow

3.0 PROJECT SCOPE

i. Every project must implement the multimedia design processes; planning, analysis, design, development, implementation and evaluation.

ii. For multimedia based project, the project should be in the form of multimedia products which includes interface, interactivity and navigation design process.

3.1 Animation

- Duration of the animation is within **4 – 7 minutes** including the introduction and credits. The animation should focus on **QUALITY** instead of duration.
- Storyline and characters of the animation must be original.
- The content of the animation must be suitable for general viewing. (Rated as "U" : *Umum* / General Audiences)

3.2 Game

- Must have a mission (reason to play the game)
- At least have 3 levels
- Basic function for game : save and pause
- Storyline and characters of the animation must be original.

3.3 Video Production

- Duration of the video is within **10 – 15 minutes** including the introduction and credits.
- Idea and storyline of the video must be original.
- The content of the video must be suitable for general viewing. (Rated as "U" : *Umum* / General Audiences)
- Element of Computer Generated Imagery (CGI) is a **MUST** in the Video.
- The percentage of CGI usage is **more than 50%** in overall scenes (used for creating dynamic scenes / environments/characters or special effects)
  Categories:

  i. Short Film
     - A short film is any film not long enough to be considered a feature film.

  ii. Docudrama
     - A combination of real events and fiction that shows dramatizes real well-known story or events (combines elements of documentary and drama)

3.4 Courseware

- The courseware must at least cover **4** topics/chapters/learning modules.
- The courseware should focus on **QUALITY** of the contents and methods of delivering the knowledge instead of number of topics/chapters/learning modules.
- The content must not infringe copyright issue.
- Characters and objects of the courseware must be original.
- The content of the courseware must be suitable for general viewing. (Rated as "U" : Umum / General Audiences)

3.5 Interactive Application

- The interactive application should focus on **QUALITY** of the contents and methods of delivering the content instead of number of pages.
- The content must not infringe copyright issue.
- Characters and objects of the interactive application must be original.
- The content of the interactive application must be suitable for general viewing. (Rated as “U” : Umum / General Audiences)

4.0 PROJECT PHASES AND CONSULTATION

Project phases and consultation are divided into two clusters (Project 1 and Project 2) for **FIVE (5)** types of products:

i. Animation
ii. Courseware
iii. Interactive application
iv. Game design & development
v. Video Production.

These entire products require specific project phases at each project clusters.

4.1 Animation Project Phases and Consultation

Project 1

Phases in animation consist of storyline and scripting; storyboard, character design and environment design; sound recording; modelling and rigging; and project 1 report.

Project 2

Phases in animation consist of scene layout; animate; surfacing; visual effects; lighting (3d); sound effect; final mix and final report.

4.2 Game Project Phases and Consultation

Project 1

Phase in Game Design development consists of Game Story, Character, Game Design, Audio, Low Fidelity Prototype and project 1 report.

Project 2

Phases in Game Design development consists of Modeling & Rigging, Animation, Game Development, Testing, Final Product and final report.

4.3 Video Production Project Phases and Consultation

Project 1

Phases in Video Production consist of conceptualization, scripting, storyboard, pre-production support documentation, presentation and project 1 report.

Project 2

Phases in Video Production consist of video shooting and cinematography, video editing, sound recording/editing/mixing, testing, final video and project 2 report.

4.4 Courseware Project Phases and Consultation

Project 1

Phases in Interactive Application consist of User Requirement, Content Gathering, Content Design; Interface / Storyboard and project 1 report.

Project 2

Phases in Interactive Application consist of Development, Testing, User Manual and final report.

4.5 Interactive Application Project Phases and Consultation

Project 1

Phases in Interactive Application consist of User Requirement, Content Gathering, Content Design; Interface / Storyboard and project 1 report.

Project 2

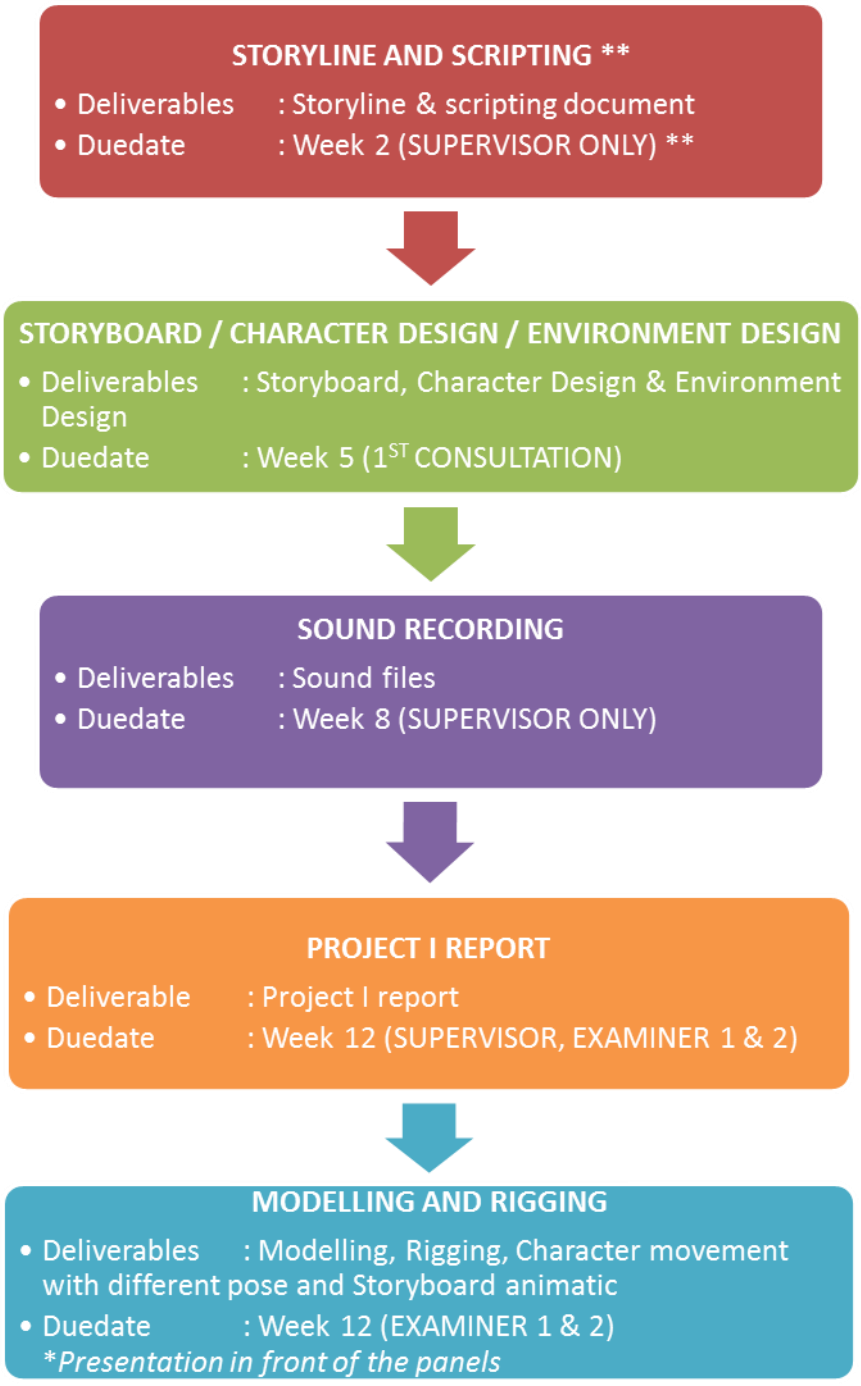
Phases in Interactive Application consist of Development, Testing, User Manual and final report.

5.0 PHASES FLOWCHART AND DESCRIPTION

5.1 Animation

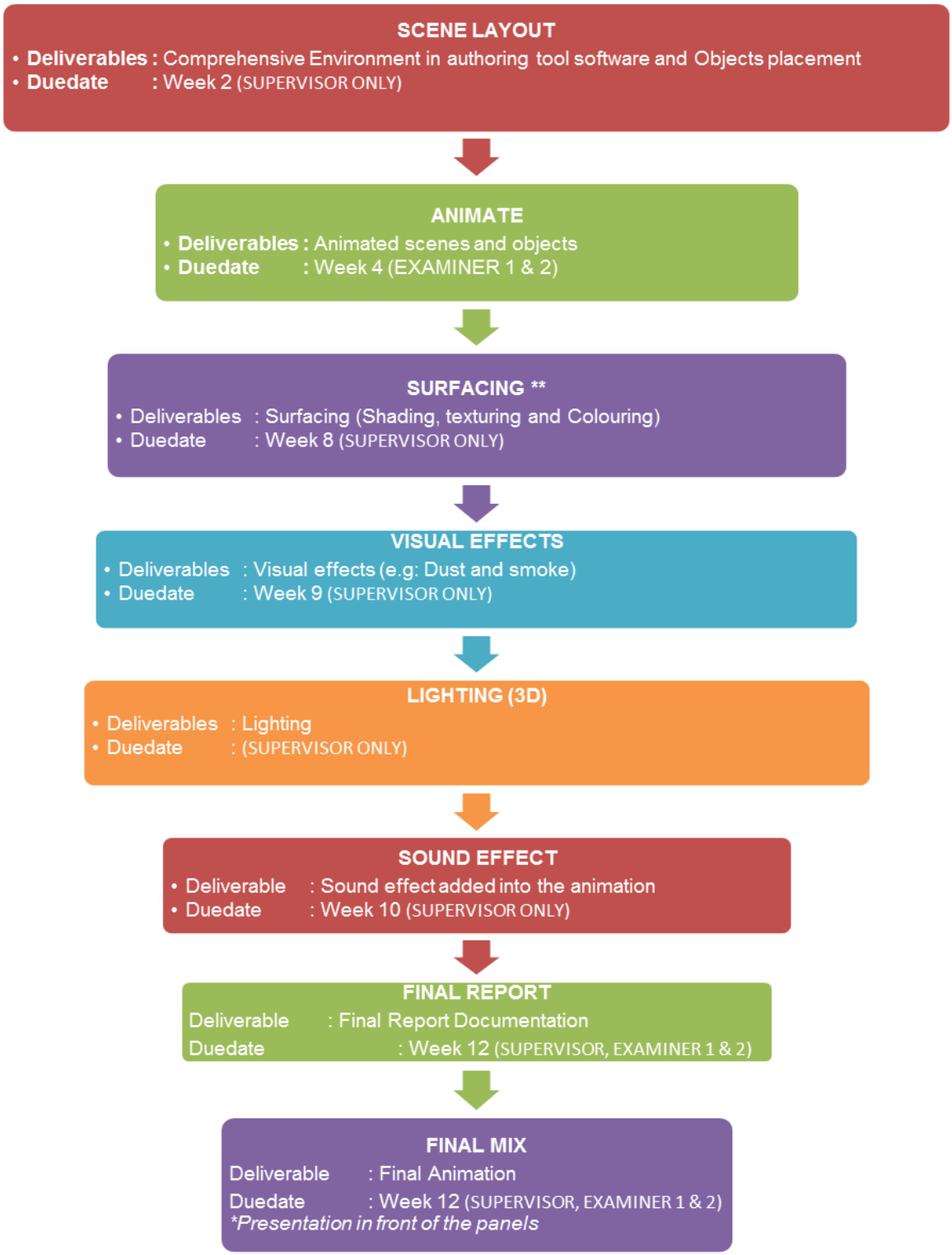
5.1.1 Animation Phases Flowchart For FYP1

***** Still consider a consultation (5% of your consultation but just present in front of your supervisor)***



5.1.2 Animation Phases Flowchart For FYP2

***** Still consider a consultation (5% of your consultation but just present in front of your supervisor)***



5.1.3 Animation Phases Description For FYP1

FYP	Animation Development	Goal	Processes/Tasks	Deliverables	Week
FYP1	**Storyline and Scripting**	Produce a storyline and script for the animation	1. Describe the problem statement, objective and project scope. 2. Describe the animation overall storyline. 3. Describe the characters involved. 4. Describe the message of the animation. 5. Describe the genre of the animation. 6. Describe the environment. 7. Write the spec script of the animation.	1. Storyline document 2. Scripting document (Spec Script) ***Present to Supervisor only***	**Week 2** (5% of your consultation)
	Storyboard / Character Design / Environment Design	Produce a comprehensive storyboard sketches, model sheet (4 different views) and environment design.	1. Describe the storyline by sketching a detail storyboard (4x4 panel storyboard and 2 panel storyboard). 2. Describe the transition effect from scene to scene. 3. Describe the audio to be included into the animation. 4. Describe the visual effect. 5. Describe the camera movement. 6. Draw the model sheet with 4 different views (front, side, ¾ , and back) 7. Draw the facial expression for the character. 8. Describe the characteristic/behaviour/ attitude each of the characters. 9. Draw the environments.	1. Storyboard • 4x4 panel (sketches without explanation) • 2 panel (details with explanation) 2. Character Design 3. Environment Design	**Week 5** (1st consultation)
	Sound Recording	Produce a good quality of sound recording (narration or spoken dialog)	1. Record sound. 2. Process and edit sound.	1. Sound files ***Present to Supervisor only***	**Week 8**
	Modelling and Rigging	Produce character using authoring tool software	1. Model character 2. Assign objects into different layers (2D) or apply Rigging (3D) 3. Character can be manipulated in different pose.	1. Modelling 2. Rigging 3. Character movement with different pose 4. Storyboard animatic	**Week 12** (Final Presentation)
	Project I report	Write a report for project 1	1. Write a report covering: • Chapter 1: Introduction • Chapter 2: Literature Review • Chapter 3: Analysis • Chapter 4: Design • Chapter 5: Conclusion	1. Project I report	**Week 12** (Final Presentation)

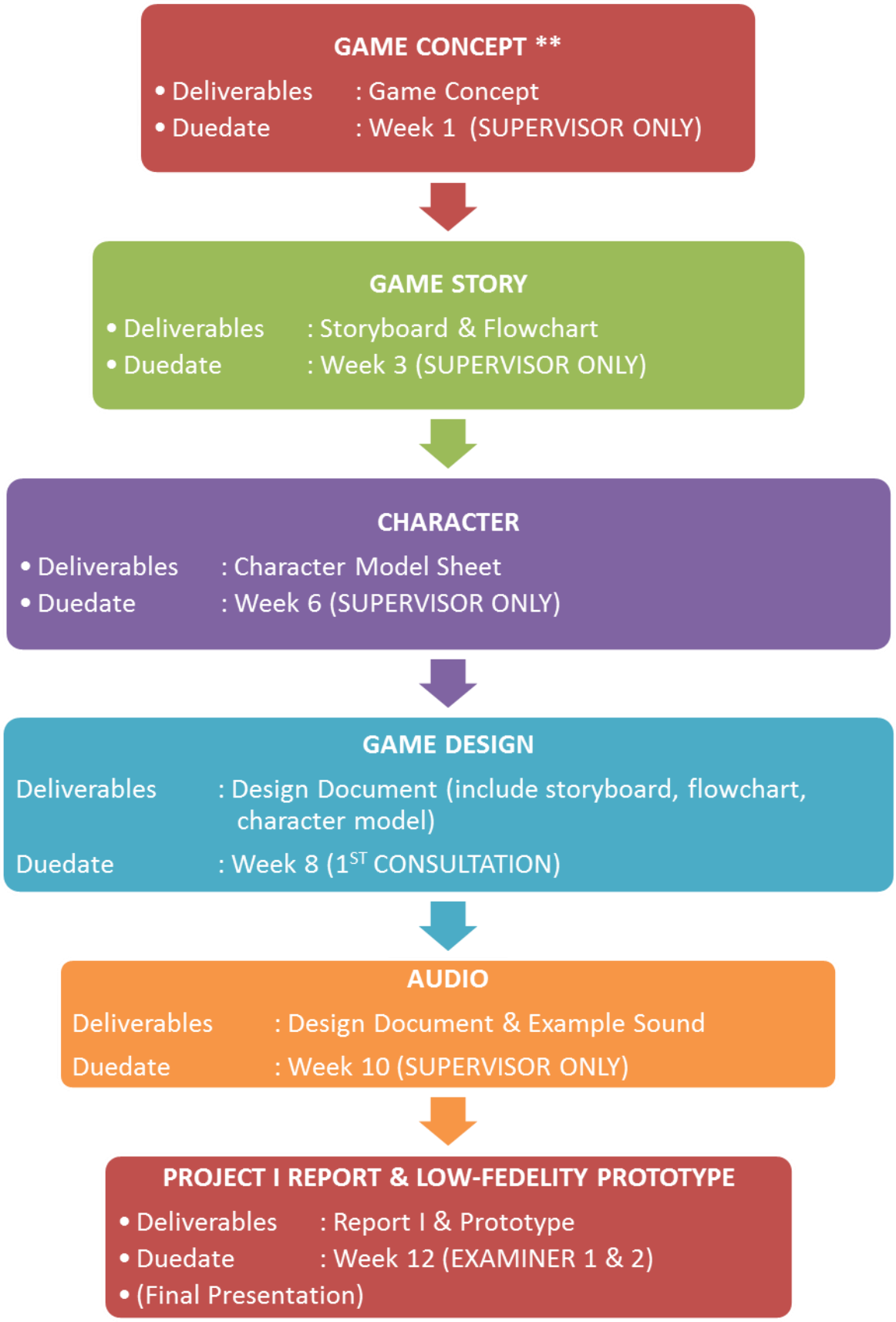
5.1.4 Animation Phases Description For FYP2

FYP	Animation Development	Goal	Processes/Tasks	Deliverables	Week
FYP2	**Scene layout**	Produce scene with comprehensive environment design with proper objects placement	1. Model environment. 2. Place objects in the suitable position in the scene. 3. Place camera position in the scene based on storyboard.	1. Comprehensive environment in authoring tool software 2. Objects placement ***Present to Supervisor only***	**Week 2**
	Animate	Produce animation	1. Animate character. 2. Animate environment. 3. Render in lowest quality	1. Animated scenes and objects.	**Week 5 (Pre-Presentation – 10%)**
	Surfacing	Produce realistic object appearance	1. Define the attribute of the object. 2. Apply shading, texturing and colouring onto objects.	1. Surfacing • Shading, • Texturing0 • Colouring ***Present to Supervisor only***	**Week 8**
	Visual Effects	Produce effects to support the animation	1. Define type of visual effects to be added into the animation. 2. Apply visual effects.	1. Visual Effects (e.g: wind blowing dust) ***Present to Supervisor only***	**Week 9**
	Lighting (3D)	Produce logic and realistic lighting effects	1. Define type and number of lights to be added into the scene. 2. Define the position of the lights. 3. Apply lighting according to the environment.	1. Lighting (3D) ***Present to Supervisor only***	-
	Sound Effect	Produce sound effects to support the animation and emotion of the storyline.	1. Define type of sound effects to be added into the scene. 2. Apply sound effect into the timeline.	1. Sound effect added into the animation. ***Present to Supervisor only***	**Week 10**
	Final Mix	Produce final animation in a video format.	1. Compile each scene into one continuous animation. 2. Add Introduction scene and credit scene. 3. Recheck the visual and audio quality of the overall animation.	1. Full animation	**Week 12 (Final presentation)**
	Final Report	Write a complete documentation for the project	1. Write a report covering all chapters.	1. Final report documentation	**Week 12 (Final Presentation)**

5.2 Game

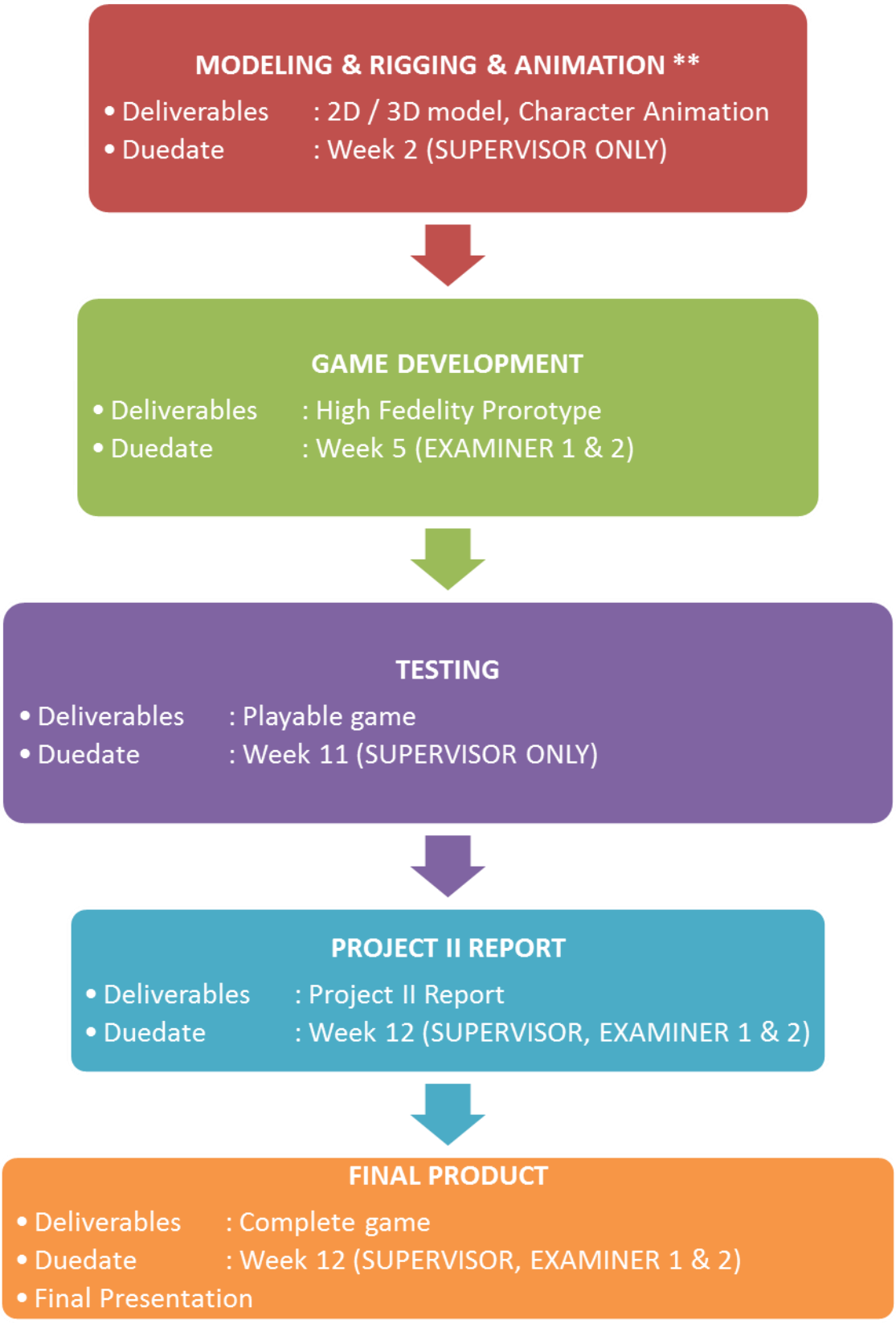
5.2.1 Game Phases Flowchart For FYP1

***** Still consider a consultation (5% of your consultation but just present in front of your supervisor)***



5.2.2 Game Phases Flowchart For FYP2

***** Still consider a consultation (5% of your consultation but just present in front of your supervisor)***



5.2.3 Game Phases Description for FYP1

FYP	Phase	Goal	Processes/Tasks	Deliverables	Week
FYP1	**Game Concept**	Produce an initial game concept or proposal	1. Describe the problem statement, objective and project scope. 2. Describe the game included overall storyline. 3. Describe the target audience. 4. Describe the game genre. 5. Describe the target platform. 6. Describe the overall gameplay – what the player is supposed to do, what type of environment or scenarios the player will encounter and general game flow. 7. Schedule and budget.	Game Concept ***Present to Supervisor only***	**Week 1** (5% of your consultation)
	Game Story	Produce a whole game story and how the game will be played (expand the game concept)	1. Illustrate and describe the game story. 2. Illustrate the structure/flowchart - how a player starts a game, the levels and how the game ends. 3. Explain the order of the story and any diverging plot elements or optional sequences/levels.	- Storyboard ***Present to Supervisor only***	**Week 3**
	Character	Provides all the drawing and sketches needed	1. concept artist - illustrate and drawing the character model sheet such as characters, weapon, vehicles ,map layout and game world	Character Model Sheet ***Present to Supervisor only***	**Week 6**
	Game Design	Provides detail the structure and content of a games including rules and how game will be played	1. Describe level design requirements–difficulty level, reward and scoring systems. 2. Describe gameplay mechanics including game physics, game save/pause, and rules. For example: Gameplay of 'Fighting' can be deconstructed (game mechanics) such as attack, defend, punch, kick, or block	Design Document (include storyboard, flowchart, character model)	**Week 8** **(1st consultation)**
	Audio	Describe sounds for game	1. Describe audio – installation music sequence, title theme, character sound effects and interface sound effects etc.	Design Document Example sound ***Present to Supervisor only***	**Week 10**
	Low Fidelity Prototype & Report	Produce the prototype & Report evaluation	1. Produce low fidelity prototype 2. Complete report I	Prototype & Report	**Week 12** **(FYP I presentation)**

5.2.4 Game Phases Description for FYP2

FYP	Phase	Goal	Processes/Tasks	Deliverables	Week
FYP2	**Modeling & Rigging Animation**	Convert concept artist's character to 2D or 3D assets Develop animation	1. Create a wireframe 2. Polygon modelling 3. Texturing – project's objects seems to have a correct material 4. Character rigging 5. Animate all the characters and movements	2D or 3D model Character animation ***Present to Supervisor only***	**Week 2**
	Game Development	Game engine	1. Integrate it all. (sounds, animations ,objects, texture, ideas and planning into the engine) 2. Codes/scripting (programming) 3. High fidelity prototype – build using software (first playable – proof of concept) includes features such as core gameplay mechanic, demonstration of control, example gameplay goals, etc.	High fidelity prototype	**Week 5 (Pre-Presentation - 10%)**
	Testing	Do Alpha and beta testing	1. Alpha testing – among team members 2. Beta testing – informal testing (before release the game)	Playable game ***Present to Supervisor only***	**Week 11**
	Final Product & Report	Presentation the final product & Report evaluation	1. Presentation FYPII 2. Complete Report II	Complete and playable game	**Week 12 (Final Presentation)**

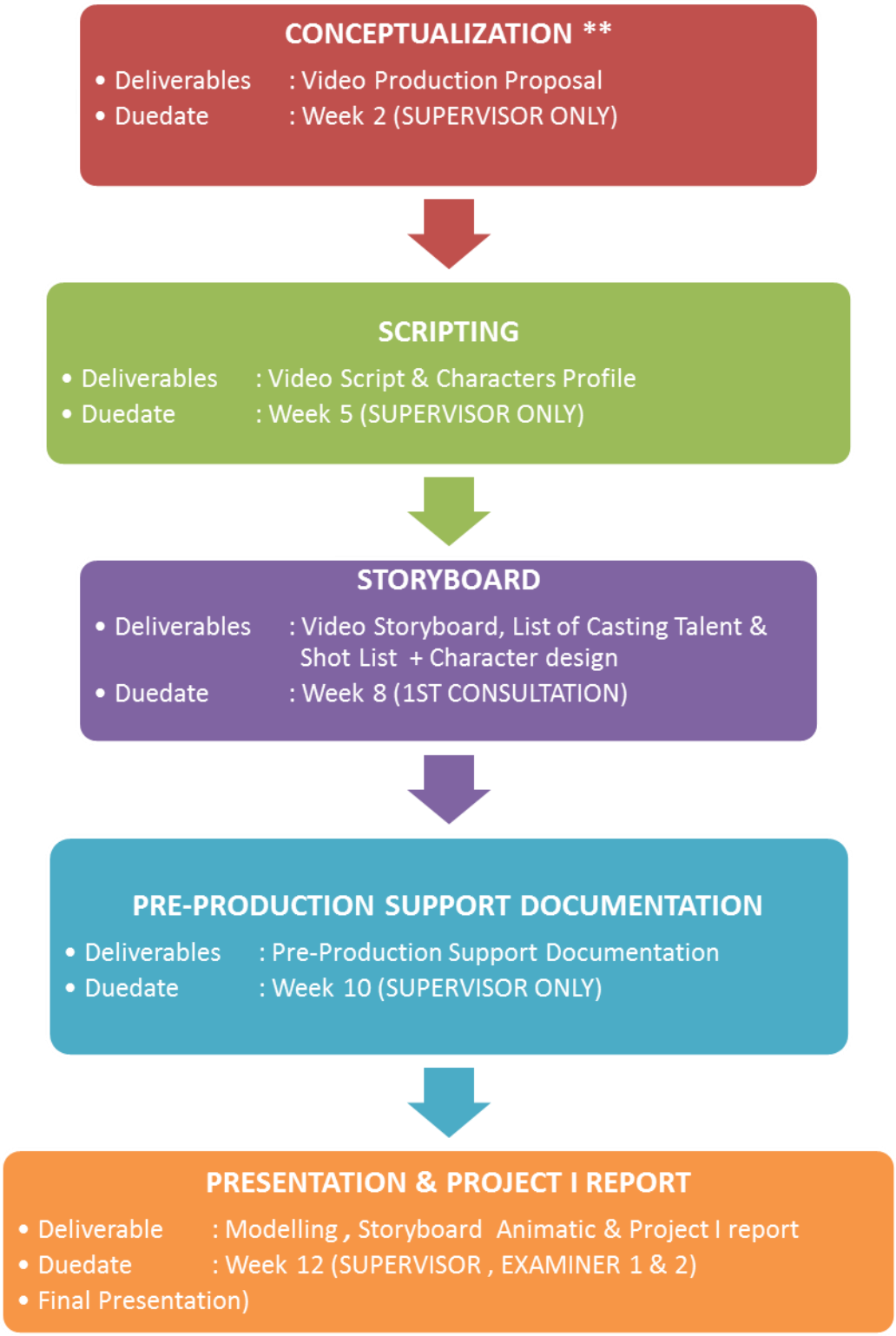
Usability Recommendations:

1. Clear menu structure
2. Provide help / tutorial
3. Don't waste user time – skip introduction
4. Enable save and pause game – auto save game
5. Sound control –on and off
6. Implement high Score

5.3 Video Production Phases Flowchart For FYP1

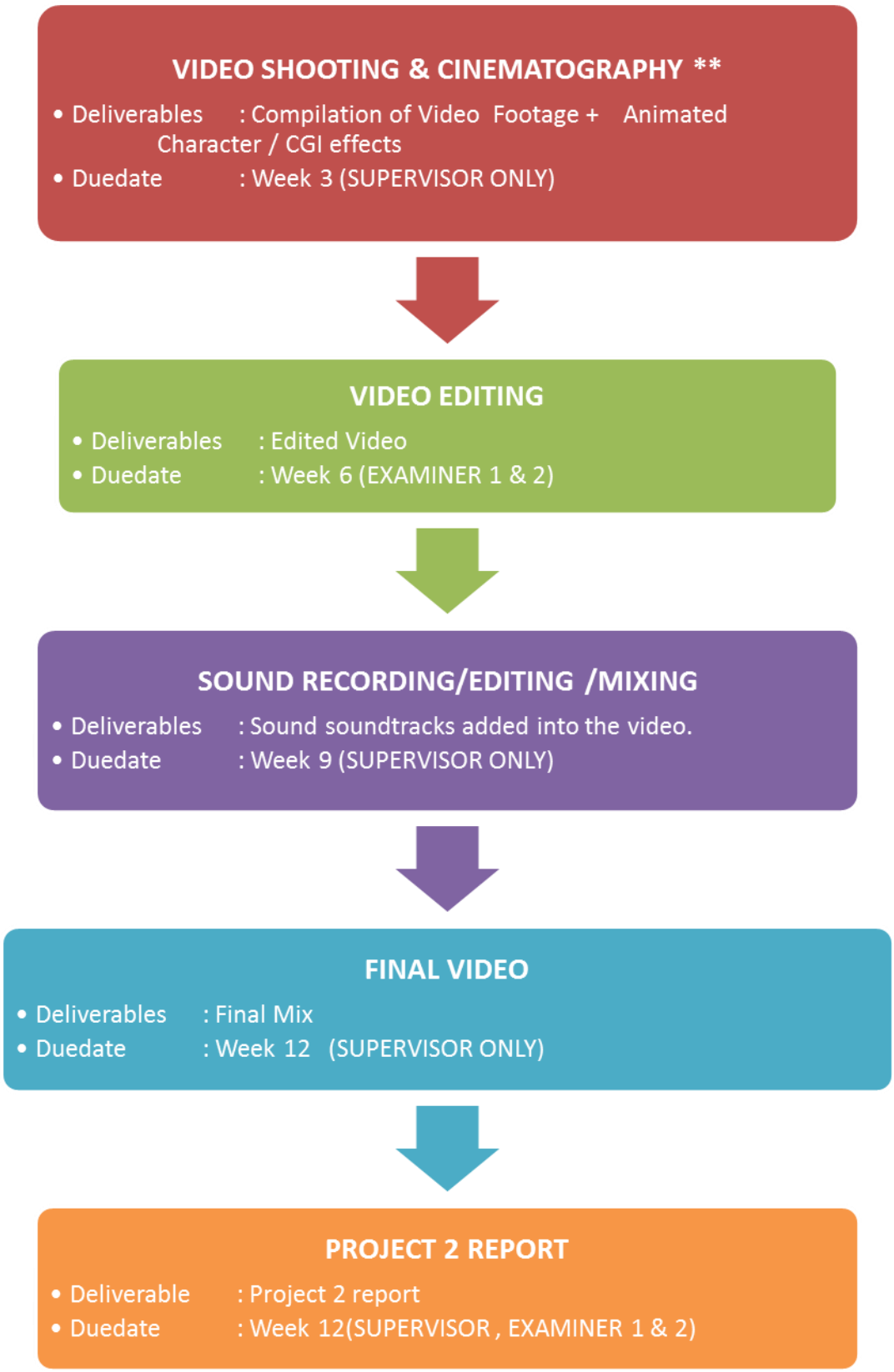
5.3.1 Video Production Phases Flowchart For FYP1

***** Still consider a consultation (5% of your consultation but just present in front of your supervisor)***



5.3.2 Video Production Phases Flowchart For FYP2

***** Still consider a consultation (5% of your consultation but just present in front of your supervisor)***



5.3.3 Video Production phases Description for FYP1

FYP		Video Production	Goal	Processes/Tasks	Deliverables	Week
FYP1	(Pre-Production)	**Conceptualization**	Produce an initial video production proposal	1. Describe the problem statement, objective and project scope. 2. Describe the video category /genre. 3. Describe the target audience. 4. Describe the video storyline. 5. Describe the desired impact/messages of the video. 6. Schedule (Gantt chart) and budget.	Video Production Proposal ***(Present to Supervisor Only)***	**Week 2** (5% of your consultation)
		Scripting	Write and produce a detailed script of the video	1. Illustrate and describe the characters – characters development 2. Produce a detail spec script	1. Video Spec Script 2. Characters Profile ***(Present to Supervisor Only)***	**Week 5**
		Storyboard	Produce a detailed storyboard design of the video	1. Illustrate and describe the visual composition of video shots (capture images) 2. Illustrate and describe the set location/environments 3. Illustrate and describe the camera shots, camera & characters movements and camera angle 4. Describe the transition between the next scenes. 5. Prepare a list of casting talent - main, supporting & extra role(s) including the description of interior and exterior characters 1. Draw the model sheet with 4 different views (front, side, ¾ , and back) ***(3D character only)***	2. Video Storyboard 3. List of Casting talent 4. Character Design ***(for 3D character)***	**Week 8** **(1st consultation)**

		Pre-Production Support Documentation	Produce a detailed Pre-Production Support Documentation	Produce Pre-Production Support Documentation 1. Prepare production logistics cost 2. Prepare schedule (based on day/time, scene, location & characters) 3. Describe & determine the shoot location(s)-(indoor or outdoor) 4. Prepare a list of props (e.g.: costume/hair/make-up/dressing-furniture etc.) 5. Prepare an equipment checklist essential for a location shoot (e.g.: camera package, lighting, tripods, sound, cleaning kits, repair kits-(camera & sound) & miscellaneous) 6. Prepare Actor's contact list 7. Prepare Actor's release form 8. Prepare shot lists	1. Pre-Production Support Documentation ***(Present to Supervisor Only)***	**Week 10**
		Presentation & Project I report	Produce character using authoring tool software & Write a report for project 1	1. Model character and apply Rigging (3D character) 2. Produce storyboard animatic 3. Write a report covering: a. Chapter 1: Introduction b. Chapter 2: Literature Review c. Chapter 3: Planning d. Chapter 4: Design e. Chapter 5: Conclusion	1. Modelling ***(for 3D character)*** 2. Storyboard animatic 3. Project I report	**Week 12** **(Final Presentation)**

5.3.4 Video Production phases Description for FYP2

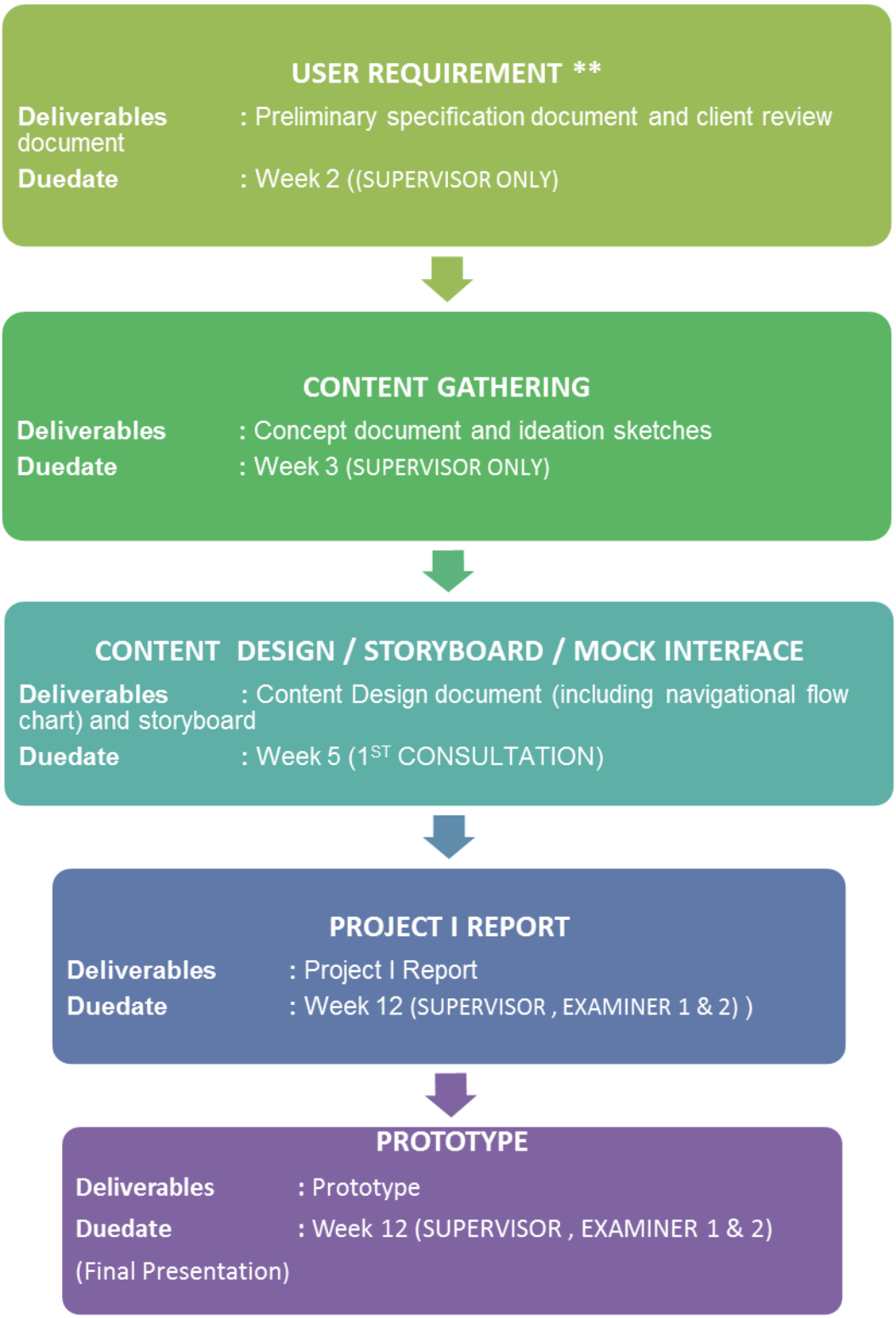
FYP		Video Production	Goal	Processes/Tasks	Deliverables	Week
FYP2	**(Production)**	**Video Shooting and Cinematography**	Video shooting based on the storyboard. • Applying appropriate cinematography techniques	1. Video shooting & recording 2. Applying appropriate cinematography techniques: - lighting setup, shot sizes, angles & camera movements *3.* Animate character ***(for 3D character)*** 4. After cut out/removal of unwanted video clips and unwanted scenes, combine all the video clips as one video file.	Combination of Video Footages + 3D Character ***(for 3D character)*** *****Present to Supervisor Only***	**Week 3**
	Post-Production	**Video Editing**	Produce a completed edited video	1. Use appropriate techniques, transitions, and conventions 2. Applying titling, color correction, filters and other enhancements. 3. Use appropriate visual special effects (CGI visual technique) 2. Animated character composited in the real environments ***(for 3D character)***	Edited Video with CGI / 3D Character	**Week 5 (Pre-presentation - 10%)**
		Sound Recording/Editing /Mixing	Produce a good quality of sound recording (narration/ voice over or dialogue) and produce a mix soundtracks	1. Dubbing/ re-recording dialogue 2. Use appropriate sound to create impact: • Speech or spoken sound, sound effects and music background 3. Synchronize sound and vision 4. Produce final mix of video. 5. Render in .mp4 format	Video with Soundtracks *****Present to Supervisor Only***	**Week 9**
		Testing	Do Alpha and beta testing	1. Alpha testing – in-house testing (testing group among team members/friends) 2. Beta testing – external testing (testing group should be representative of real users)	Testing Results & Final Video ****Present to Supervisor only***	**Week 10**

		Final Video & Final Report	Write a complete documentation for the project	1. Write a report covering all chapters.	Final Video & Final report documentation	**Week 12 (Final Presentation)**

5.4 Interactive Application & Courseware

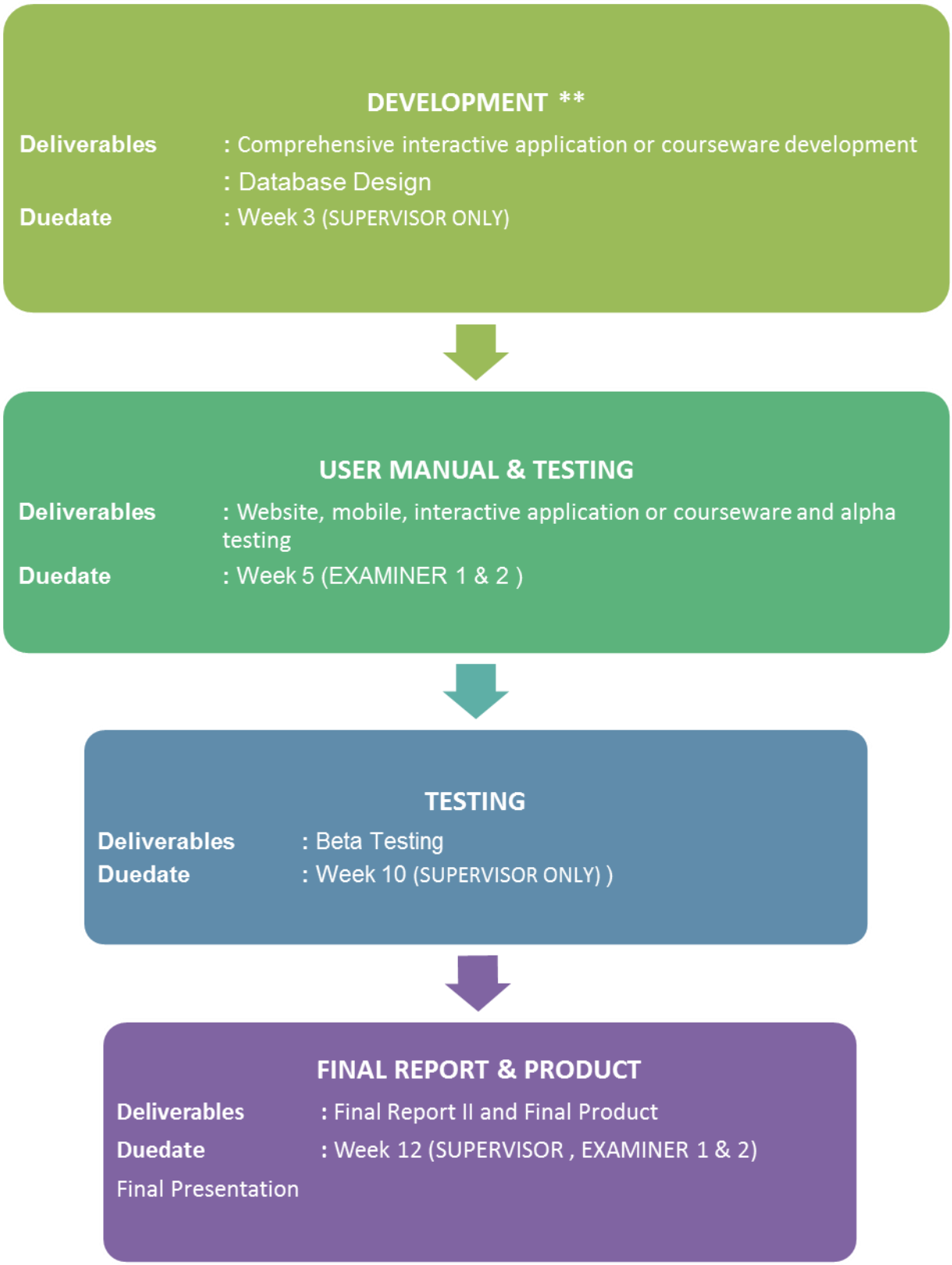
5.4.1 Interactive Application/Courseware Phases Flowchart For FYP1

***** Still consider a consultation (5% of your consultation but just present in front of your supervisor)***



5.4.2 Interactive Application/Courseware Phases Flowchart For FYP2

***** Still consider a consultation (5% of your consultation but just present in front of your supervisor)***



5.4.3 Interactive Application/Courseware Phases Description For FYP1

FYP	Interactive Application / Courseware Development	Goal	Processes/Tasks	Deliverables	Week
FYP1	**User Requirement**	Produce a user requirement documentation for the interactive application	1. Describe the problem statement, objective and project scope. 2. Conduct analysis on user requirement 3. Describe functionality requirements 4. Identify user scenarios 5. Create production schedule 6. Design delivery architecture platform of the project	1. Preliminary specification document 2. Client review document ***Present to Supervisor only***	**Week 2** (5% of your consultation)
	Content Gathering	Produce a comprehensive discovery phases documentation on concept, sketches, user/audience needs, concept, goals, messages, and market research	1. Identify user/audience needs 2. Review from user and audience 3. Review from content expert(for courseware only) 4. Describe the concept and theme 5. Create sketches 6. Describe the aesthetics of the overall interactive application	1. Concept document 2. Ideation sketches ***Present to Supervisor only***	**Week 3**
	Content Design / Storyboard	Produce a good content design documentation and produce detail storyboard	1. Identify content architecture 2. Describe structure and wire frames 3. Identify usability standards 4. Draw Storyboard 5. Develop navigational flow chart	1. content design document (including navigational flow chart) 2. Storyboard	**Week 5** (1st consultation)
	Prototype & Project I report	Write a report for project 1. Create a prototype for interface, layout and navigation	1. Write a report 2. Produce a prototype (Describe user interface design, the aesthetics of interactive application (color, font etc) Develop navigational flow chart	1. Project I report 2. Prototype	**Week 12** (Final Presentation)

5.4.4 Interactive Application/Courseware Phases Description For FYP2

FYP	Interactive Application Development	Goal	Processes/Tasks	Deliverables	Week
FYP2	**Development**	Develop the interactive application with comprehensive user interface design using specific application/system	1. Develop the blue print 2. Identify and describe content management system 3. Establish the navigation and custom code 4. Describe the interactivity and iterative development model	1. Comprehensive interactive application or courseware development stages based on task-oriented, scenario based Interactivity	**Week 5 (Pre-Presentation - 10%)**
			5. Describe the database design 6. Perform the development on the usability and technical performance	2. Database design	
	User manual and Testing	Deployment of project : website, mobile, interactive application or courseware Conduct user or product testing	1. Deploy interactive application project (website, mobile, interactive application or courseware) 2. Alpha Testing	1. Website, mobile, interactive application or courseware 2. Alpha Testing ***Present to Supervisor only***	**Week 8**
	Testing	Conduct user or product testing	1. Beta Testing	1. Beta Testing ***Present to Supervisor only***	**Week 10**
	Final Report & Product	Presentation the final product & Report evaluation	1. Presentation FYPII 2. Complete Report II	Complete product and report	**Week 12** (Final Presentation)

6.0 REPORT WRITING GUIDELINES

6.1 Project 1

Below are the suggested Main Body Section headings for Project 1.

Title on the first page Declaration
Acknowledgement
Abstrak (Versi bahasa Malaysia)
Abstract (English Version)
Table of content List of figures
List of tables
List of abbreviations List of symbol
Glossary

1. Introduction
    1.1. Project background
    1.2. Problem statement(s)/Research question(s)
    1.3. Objective(s)
    1.4. Scope of the project

2. Literature review
    2.1. Subheading
    2.2. Application review
        2.2.1 Subheading
        2.2.2 Subheading

3. Planning
    3.1. Pre-production
        3.1.1 Subheading
    3.2. Production
        3.2.1 Subheading
    3.3. Post production
        3.3.1 Subheading

4. Design

5. Conclusion

References
Appendices
    Appendix A
    Appendix B

6.2 Project 2

Below are the suggested Main Body Section headings for Project 2.

- The heading for Sections 1.0, 2.0, 3.0 & 4.0 will remain the same and should be consistent with Project 1 Final Report. Any amendments made during Project 1 should reflect in Project 2 Final Report. Students are reminded to always keep few versions of reports for their own references and make appropriate labelling as not to confuse which reports should be updated.

Title on the first page Declaration
Acknowledgement
Abstrak (Versi bahasa Malaysia)
Abstract (English Version)
Table of content List of figures
List of tables
List of abbreviations List of symbol
Glossary

1. Introduction
   - 1.1. Project background
   - 1.2. Problem statement(s)/Research question(s)
   - 1.3. Objective(s)
   - 1.4. Scope of the project

2. Literature review
   - 2.1. Subheading
   - 2.2. Application review
     - 2.2.1 Subheading
     - 2.2.2 Subheading

3. Planning
   - 3.1. Pre-production
     - 3.1.1 Subheading
   - 3.2. Production
     - 3.2.1 Subheading
   - 3.3. Post production
     - 3.3.1 Subheading

4. Design

5. Implementation

6. Testing

7. Conclusion and Future Work
   - 7.1. Subheading
   - 7.2. Subheading

References
Appendices
   - Appendix A
   - Appendix B

7.0 ASSESSMENT

PROJECT I						
	Continuous Assessment (5%)	**Report (15%)**	**Prototype (10%)**	**Presentation (5%)**	**Consultation (10%)**	**Marks**
Examiner 1	-	√	√	√	-	30%
Examiner 2	-	√	√	√	-	30%
Supervisor	√	√	√	-	-	30%
Consultant	-	-	-	-	√	10%
Total						100%

PROJECT II						
	Continuous Assessment (5%)	**Report (10%)**	**Product (15%)**	**Presentation and Poster (5%)**	**Consultation (10%)**	**Marks**
Examiner 1	-	√	√	√	-	30%
Examiner 2	-	√	√	√	-	30%
Supervisor	√	√	√	-	-	30%
Consultant	-	-	-	-	√	10%
Total						100%

Relative Relevance and Weightage of Members of the FYP Evaluations:

Rank	Competence	Weightage
1st	Examiner evaluation of final product	30%
2nd	Examiner evaluation of final report	20%
3rd	Supervisor evaluation of final product	15%
4th	Supervisor evaluation of final report	10%
5th	Examiner evaluation of oral presentation	10%
6th	Consultant evaluation of consultation phases	10%
7th	Supervisor evaluation of the continuous progress	5%

UNIVERSITI MALAYSIA SABAH
FACULTY OF COMPUTING AND INFORMATICS

Final Year Project

Student Log Book

roject Title

_____
_____
_____
_____
_____

Student Info

Name :

Matric No :

Email :

Mobile No :

Course Code :

Supervisor Info

Supervisor :

Co-Supervisor (if applicable) :

UNIVERSITI MALAYSIA SABAH

FACULTY OF COMPUTING AND INFORMATICS

STUDENT LOG BOOK NOTES

1) This log book needs to be used by students taking FYP 1 and FYP 2.

2) It is the responsibility of the student that this log book is **kept up to date** and that the student complies with the Supervisor's suggestions and recommendations as noted by the student in the log book and approved by the Supervisor.

3) Student **MUST** make a regular meeting with a supervisor at least ONCE in TWO WEEKS. A minimum number of meetings are **6 times per semester**.

4) Supervisor with advice from FYP Coordinator and Consultants has the right not to allow the student to present their project if this regulation is not complied.

5) The Log Book must be submitted together with the FYP report to the supervisor as it is part of the continuous assessment requirement

UNIVERSITI MALAYSIA SABAH

FACULTY OF COMPUTING AND INFORMATICS

LOG BOOK

Semester : _____

Date : Meeting : 1 / 2 / 3 / 4 / 5 / 6

Student : _____

(Meeting Minute/ Achievements/ Activities

_____
_____
_____
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_____

Supervisor (Suggestion & Comments) :

_____
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_____

Next Meeting Plan : _____
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Supervisor's Signature: _____ Date: _____

Final Year Project (FYP)

Information Booklet on Guidelines for the Preparation and Submission of E-Commerce Product Based Report

Faculty of Computing and Informatics
Universiti Malaysia Sabah
Labuan International Campus

REVISION HISTORY

Date	Version	Author	Description
21st May 2014	Version 1.0	Hadzariah Ismail	FYP 1.0
11th Aug 2014	Version 1.1	Hadzariah Ismail	FYP 1.1
17th Aug 2014	Version 1.2	Hadzariah Ismail	FYP 1.2
18th Feb 2015	Version 1.3	Dg Senandong Ajor	FYP 1.3
3rd March 2015	Version 1.4	Soffri Yussof	FYP 1.4
5th March, 2015	Version 1.5	Hadzariah Ismail	FYP 1.5
18th February, 2017	Version 1.6	All E-commerce lecturers	FYP 1.6

TABLE OF CONTENTS

1.0 INTRODUCTION

Welcome to the Final Year Project (FYP) booklet. This booklet aims to provide you with information about the entire FYP process from its origin to completion. It's essentially the must-be-in-you-beg book, so do not lose it!

This document aims to guide final year undergraduate students of the Faculty of Computing and Informatics Labuan going through the Final Year Project (FYP) process. It contains information on the stages of the project, indicating elements needed when choosing the product-based category, when reports are due, and most importantly how to write concise and legible documents with good literary style, presentation and layout. It is important to note that each report must be original. Remember irrelevant information and trivial statements are of no value. It is important not to underestimate the amount of time it takes to write the report.

FYP gives you an opportunity to demonstrate your original thinking in identifying a research question and in executing the subsequent investigation. Secondly, the FYP provides you with an opportunity to work closely with a member of faculty – this mentoring process is both unusual and highly valuable in the context of undergraduate education. Thirdly, the FYP enables you to make an informed decision about your own suitability for postgraduate research. Finally, it is an opportunity to demonstrate to future employers that you have key skills they require in the workplace. This last point warrants elaboration.

1.1 Difficulties in Progressing Project

Your Supervisor must be the first person to contact if you have any difficulties or concerns about the way the Project is going. These difficulties or concerns should be raised when you meet your Supervisor and should be recorded in your logbook (on your own initiative) and should be highlighted in meetings with your appointed consultants. Normally these difficulties or concerns will be satisfactorily resolved by joint action by yourself and your Supervisor. If after following all the procedures, the difficulties or concerns remain unresolved you should contact the Head of Program for advice.

1.2 Plagiarism

We value originality and creativity in your work. The Final Year Project report is the work of individual student. Plagiarism of any kind will not be tolerated. A Turnitin report must be submitted with the FYP report. More details on Turnitin are available in the Library.

1.3 Project Pre-Requisite Course

1. Database Management System (C above)
2. Web Programming (C above)
3. System Analysis and Design (C above)

2.0 PROJECT CRITERIA

Below are the proposed criteria for product-based category:

i. Proposed project should be based on 'product' where then final outcome either online application or small software system.
   - The prototype must be fully functioning based on the systems/applications analyzed in Literature Review Section.
   - Fulfilled **ALL** objectives in Introduction Section.

ii. Only **THREE (3)** types of product will be considered for this project. (Refer to topic: scope project for the details of each types)
   - E-commerce Application
   - MIS Application
   - Mobile Applications

iii. In general, **ALL** projects must be an online/network system. Stand-alone system will be accepted when approval has been made by your supervisor and consultants.

iv. Project is accepted **ONLY** in individual form. Nevertheless project title is based on project basis. (Example: An ERP project will consist of few project scopes and each project scope will be done individually).

v. Content Management System (CMS) project's based is allowed only on the front-end design covers user interfaces and templates. Student will do back-end functions from scratch (no existing templates allowed for this process).

vi. It is **compulsory** to use reference generator tool *i.e* Endnote for report referencing style.

vii. Selection of topics
   - Student(s) are welcome to suggest any suitable project within the scope defined for the category **OR**
   - Choose a project suggested by Supervisor
   - However, project selection shall be based on the agreement of both Student and Supervisor.
   - Refer to the project specification process flow. (Figure 1.0)

viii. Supervisor's determination

- Students are allowed to choose an available/active supervisor in the current semester. (list of supervisor will be posted)
- Every supervisor has a quota of supervision and,
- Quota of each Supervisor is depending on the ratio of number of students taking a final year project to the active lecturer.
- Students are advised to meet and discuss with the potential supervisor to get the consent of the supervisory.
- However, the final supervisor's determination is through proposal evaluation meeting at Faculty level.
- Refer to the supervisor's determination process flow. (Figure 2.0)

3.0 PROJECT SCOPE

i. Every project must implement the concept of client-server architecture whether it is an online system or network system.

ii. Every project is required to implement data manipulation concept.

iii. Adoption of any devices (scanner/printer/ etc.) is highly recommended.

iv. For E-commerce based project, the project should
- Products **OR** services
- Includes payment process (using payment gateway)

v. For MIS based project, the project should
- Provide a solution to the problem of existing processes.
- Includes report **OR** statistical analysis
- Decision Support System concept.

vi. Mobile application project will be accepted on **TWO** (**2**) conditions:
- Excellent programming skills and able to work independently.
- Scopes of functions are similar to E-Commerce or MIS projects.

3.1 Contents of the Project Proposal

Student is required to come up with a **Project Proposal**. Project Proposal should contain the following aspects:

- Title of the project
- Introduction
- Problem Statement
- Objective
- Project Scope
- System Methodology (Development and data collection)
- Project Timeline (i.e. Gantt Chart).

Student need to get the supervisor approval on his/her Project Proposal before submitting it to the FYP coordinator. After the proposal has been endorsed by the Faculty Committee, the student can proceed and develop the system.

3.2 Project Specification Process

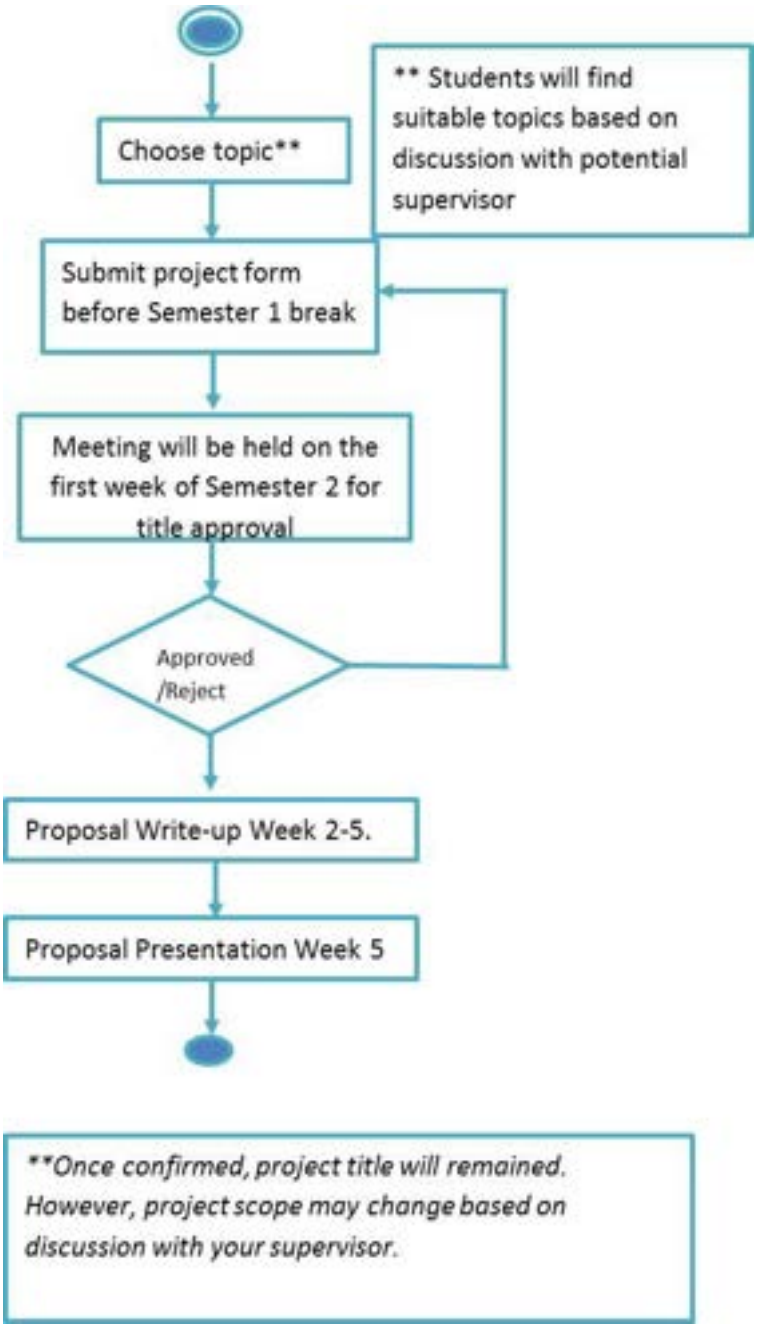

Figure 1.0 Project Specification Process

3.3 Supervisor's Determination Process Flow

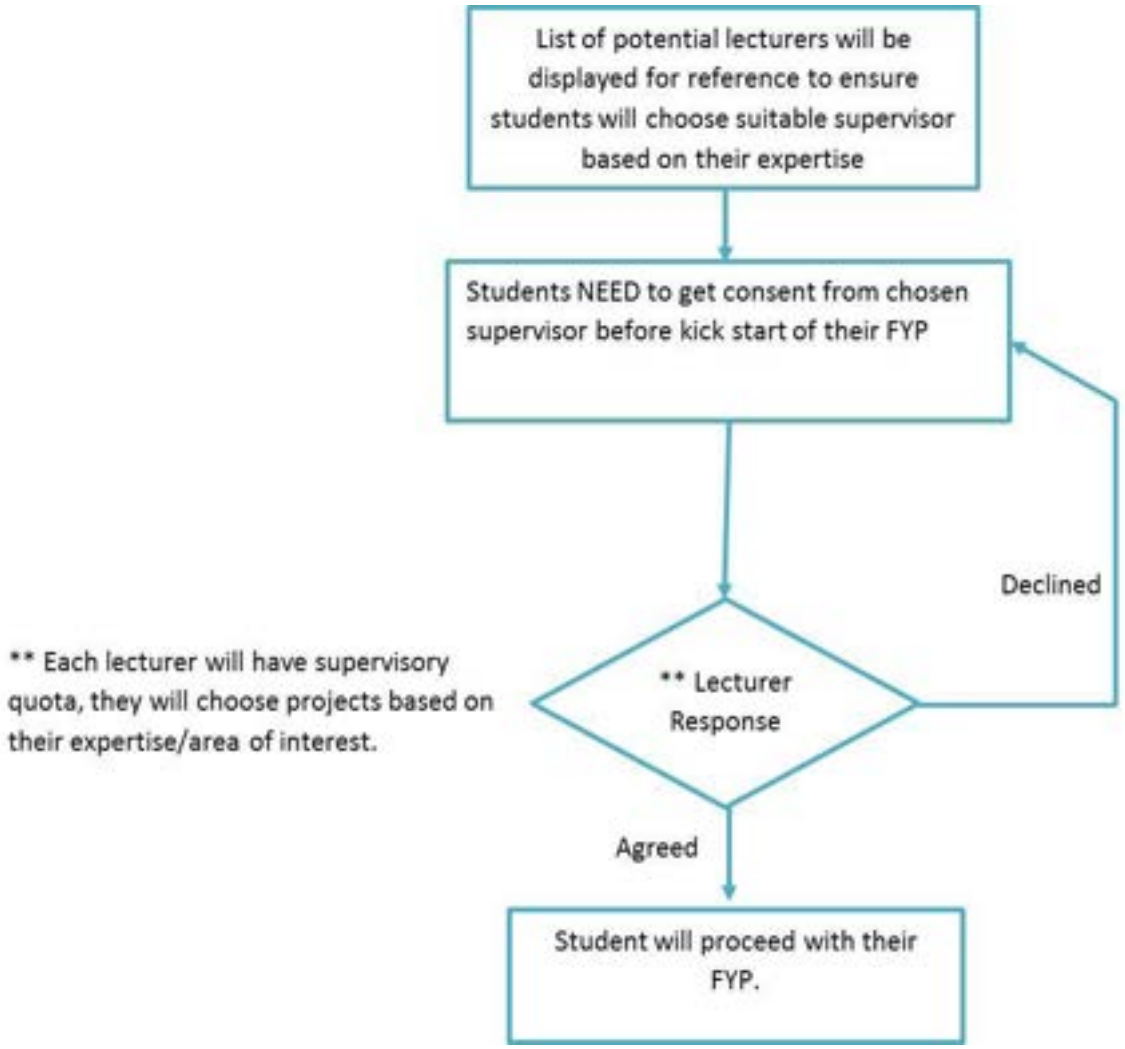

Figure 2.0 Supervisor's determination process flow

4.0 PROJECT PHASES AND CONSULTATION

4.1 Flowchart for Project 1 (Refer 4.2 for details on project phases)

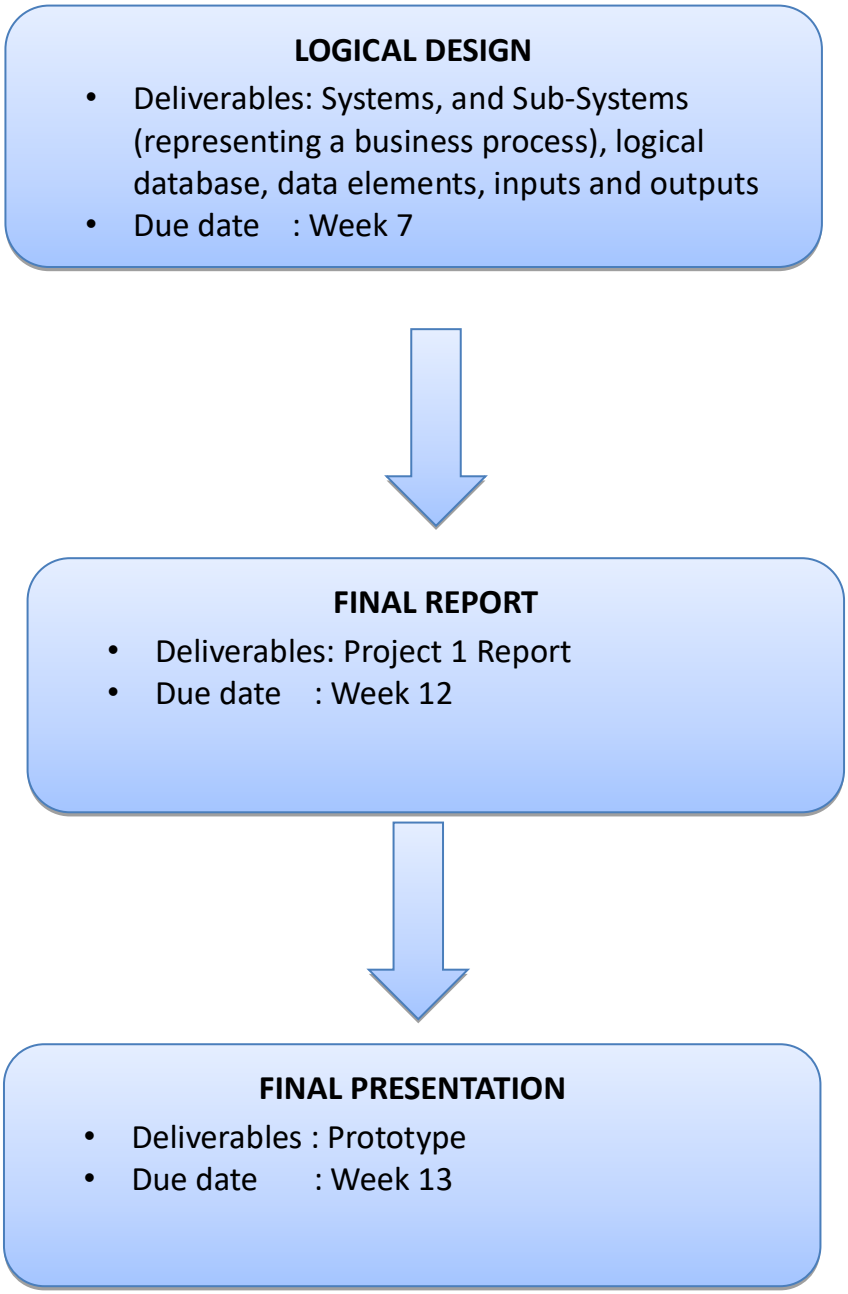

Figure 3.0 Project 1 Phases

4.2 Phases Description for FYP1

Web, MIS, Mobile Development Phases	Goal	Processes/Tasks	Deliverables	Week
Phase 1 : **Proposal Defense**	Update project proposal and produce a good quality of literature review	1. Describe Project Initiation and Planning phases **Project Initiation** • Chapter 1 **Project Planning** • Chapter 2 - Literature and Applications Review	Presentation should cover: • Introduction • Problem Statement • Project Goal • Project Objectives • Project Framework • Final Summary of Application Review	1
Phase 2 : **Logical Design**	Produce a comprehensive Data Analysis	1. Develop data analysis by using either DFD or UML method **DFD** - Context Diagram - Level 0 Diagram - Level 1 Diagram **UML** - Use Case Diagram - Sequence Diagram - Class Diagram 2. Develop Entity Relationship Diagram (ERD) 3. Develop Data Dictionary	Presentation should cover: • Summary of data gathering process and analysis • DFD Diagrams or UML Diagram • ERD • Data Dictionary	7
Phase 3 : **Report Writing**	Produce a quality report writing	Update report • Chapter 1 : Introduction • Chapter 2 : Literature Review • Chapter 3 : Analysis • Chapter 4 : Design • Chapter 5 : Conclusion	• FYP1 Report • Student's Log Book • Turnitin Report (<30% similiarity)	12
Phase 4 : **Presentation**	Deliver a good quality of presentation approach	Develop prototype for the proposed system.	• System Prototype	13

4.3 Flowchart for Project 2

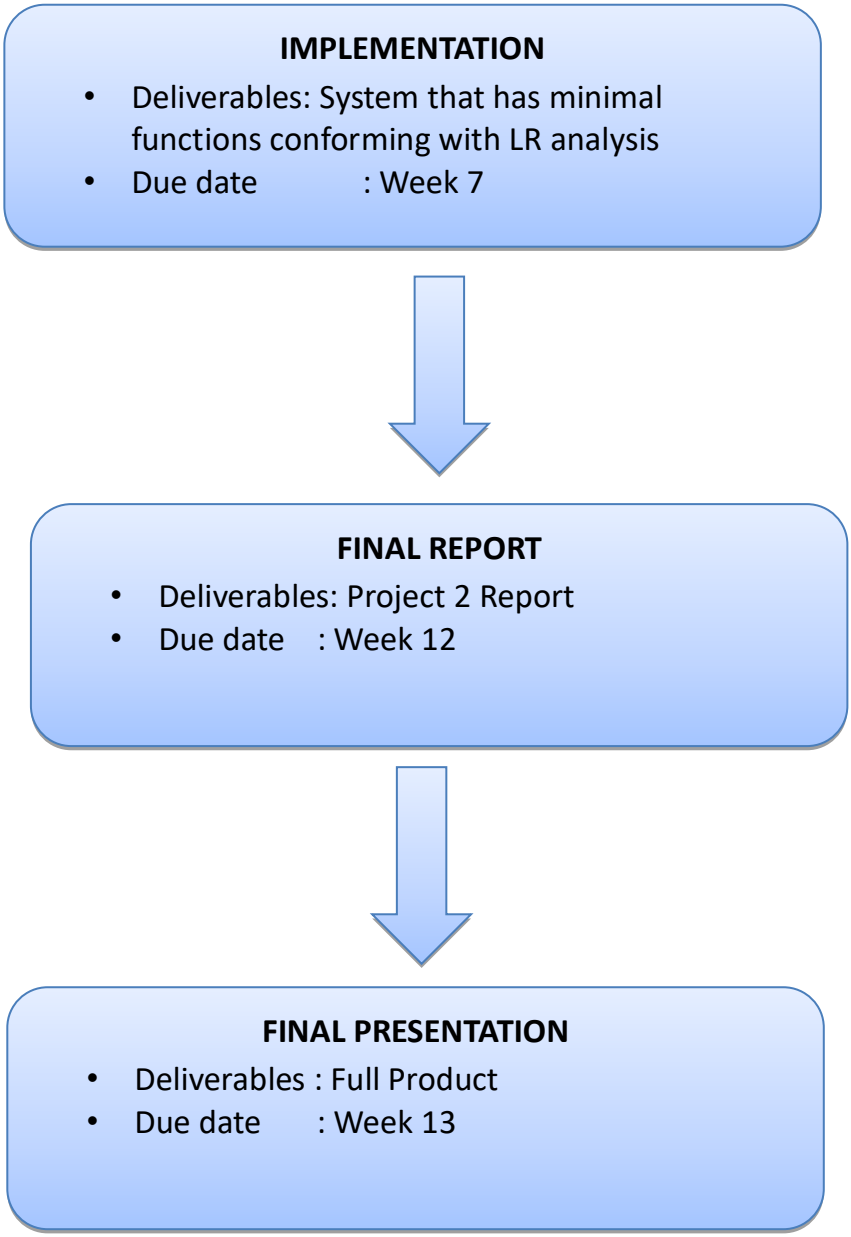

Figure 4.0 Project 2 Phases

4.4 Phases Description for FYP2

Web, MIS, Mobile Development Phases	Goal	Processes/Tasks	Deliverables	Week
Phase 1 : Implementation	System Integration	1. System Implementation	• System demonstration	9
Phase 2 : Report Writing	Produce a quality report writing	Update report • Chapter 1 – 5 • Chapter 6 : Implementation & Testing • Chapter 7 : Conclusion • References	• FYP 2 Report • Student's Log Book • Turnitin report	12
Phase 4 : Final Presentation	Demonstrate a comprehensive system	Improvement from Phase 1	• System • Poster	13

5.0 REPORT WRITING GUIDELINES

5.1 Project 1

Below are the suggested Main Body Section headings for Project 1.

1.0 Introduction

The introduction should include a full but concise statement of:
a) The background to the investigation, briefly stating the reasons governing the need for the investigation. This background should reflect the title of the project.
b) The aims or objectives of the investigation. (The Conclusion section should always refer back to the objectives you set out) The introduction should have a flowing, natural, style of writing and should read like a story.

2.0 Literature and Application Review

This section should contain an in-depth review of published application or system relevant to your investigation. Review availability of similar software packages or systems, and identify the requirements for development or enhancement of new or existing software. Where a large number of applications or systems are reviewed it is useful to group them under different aspects of the investigation, that is, to use a separate sub-section for each aspect. You should compare and contrast the literature reviewed. The important part of this section is your reporting and discussion of the literature. It is important to distinguish what you have learnt from analyzing all the applications or systems. Your conclusions, on reviewing the literature, should reinforce the aims or objectives of the investigation given earlier.

3.0 Systems Analysis and Design

For Analysis phase, you are free to choose any suitable analysis tools whether it is Traditional/Conventional or Object-Oriented. Take note that you may combine both approaches for better understanding of your proposed systems. Questionnaires/Survey/Interview is MANDATORY. Conventional/ Traditional: Context Diagram, Data Flow Diagram (DFD) (up to Level 1 or more), Entity Relationship Diagram (ERD). Object-Oriented Approach: Use Case, Class Diagram and Sequence Diagram. In Design phase, you are required to develop Data Dictionary Definitions and Logical data model with definitions.

4.0 Conclusion and Future Work

Student should remember that often this is the only section, to which in industry, some readers refer due to shortage of time. It is therefore extremely important that this section be well written. The requirement is therefore for a concise statement of the results which were sought and obtained, and their significance. The conclusions contain a series of unambiguous statements; each carefully crafted to make a point and usually presented as a numbered or bulleted list. These statements must correspond closely with the aims and objectives set out at the beginning of the report. It must therefore contain the answers to questions which gave rise to the formulation of the aims of the experiment. Recommendations, where appropriable, may be put forward together with the conclusions.

5.1.1 Content Arrangement of FYP 1 Report

Each report must be arranged in the following order.

Title Page	
Acknowledgments	
Abstrak (Malay Translation)- *italicized*	
Abstract **Table of Content**	
List of Tables	
List of Figures	
List of Appendix	
	CHAPTER 1 : INTRODUCTION
1.1	Introduction
1.2	Problem Statement
1.3	Project Goal
1.4	Project Objectives
1.5	Project Scope / Framework
1.6	Project Timeline
1.7	Summary
	CHAPTER 2 : LITERATURE AND APPLICATION REVIEW
2.1	Introduction
2.2	Literature review on topic
2.3	Application Review
	2.3.1 Summary of Application Review
	2.3.2 Final Summary of Application Review
2.4	Summary
	CHAPTER 3 : METHODOLOGY AND ANALYSIS
3.1	Introduction
3.2	Application Development and Testing Method
3.3	Data collection method
3.4	Data Analysis
3.5	Summary
	CHAPTER 4 : DESIGN
4.1	Introduction
4.2	Data Flow Diagram (DFD)
	4.2.1 (a) Context Diagram
	4.2.1 (b) Level 0 Diagram
	4.2.1 (c)Level 1 Diagram
	OR
	Unified Modeling Language (UML)
	Behavioral (Use Case Diagram, Sequence Diagram , Activity Diagram)
	Structural (Class Diagram)
4.3	System Architecture Design

5.2 Project 2

Below are the suggested Main Body Section headings for Project 2.

The heading for Sections 1.0, 2.0, 3.0 & 4.0 will remain the same and should be consistent with Project 1 Final Report. Any amendments made during Project 1 should reflect in Project 2 Final Report. Students are reminded to always keep few versions of reports for their own references and make appropriate labelling as not to confuse which reports should be updated.

5.0 Software Development

Students need to explain the functioning of the developed software using flowcharts of other methods suitable. The actual code should be included in Appendix.

6.0 Software Evaluation

This section should describe any tests that were undertaken to evaluate the software. The methodology of these tests should be described and results given. The results of the evaluation should be analyzed and the findings should be discussed in relation to the user requirements, problem analysis and specification. You should have test cases to test your systems based on criteria below:

Validation
Simply stated, this test answers the questions: Have I built the right system? Does it satisfy the requirements? It may seem obvious, but you'd be surprised the number of times that the system which is built isn't what is wanted at all. You should compare the system's behavior with the original requirements and system specification. Validation is extremely important and it should be carried out with great attention to detail.

Verification
In this case, the questions are: Have I built the system right? Is it computing the right answer? This is what most people understand by testing.

Evaluation
Finally, we ask: How good is the system? Testing on systems performance and compare it to that of other similar systems.
On top of the testing term, student should come out with testing plan consists of Integration Testing, System Testing and User Acceptance Test.

7.0 Conclusions and Future Work

Same explanation as in Report 1, also add a section of possible future work to improve the software design.

5.2.1 Content Arrangement of FYP 2 Report

Each report must be arranged in the following order.

Title Page	
Acknowledgments	
Abstrak (Malay Translation)- *italicized*	
Abstract	
Table of Content	
List of Tables	
List of Figures	
List of Appendix	
	Chapter 1 : INTRODUCTION
1.1	Introduction
1.2	Problem Statement
1.3	Project Goal
1.4	Project Objectives
1.5	Project Scope / Framework
1.6	Project Timeline
1.7	Summary
	CHAPTER 2 : LITERATURE AND APPLICATION REVIEW
2.1	Introduction
2.2	Literature review on topic
2.3	Application Review
	2.3.1 Summary of Application Review
	2.3.2 Final Summary of Application Review
2.4	Summary
	CHAPTER 3 : METHODOLOGY AND ANALYSIS
3.1	Introduction
3.2	Application Development and Testing Method
3.3	Data Collection Method
3.4	Data Analysis
3.5	Summary
	CHAPTER 4 : DESIGN
4.1	Introduction
4.2	Data Flow Diagram (DFD)
	4.2.1 (a) Context Diagram
	4.2.1 (b) Level 0 Diagram
	4.2.1 (c)Level 1 Diagram
	OR
	Unified Modeling Language (UML)
	Behavioral (Use Case Diagram, Sequence Diagram , Activity Diagram)
	Structural (Class Diagram)
4.3	System Architecture Design
	4.3.1 Dialog Sequence Diagram
	4.3.1 (a) Interface Design
	4.3.3 Database Design
	4.3.3 (a) Entity Relationship Diagram
	4.3.3 (b) Data Dictionary / Data Structure Diagram

6.0 TESTING DOCUMENTS

6.1 White Box Testing:

White Box Testing is sometimes called Glass Box Testing. White box testing is used to ensure that the code is complete and to the correct standard of software mechanism. By using the White Box Testing methods, the system developer can derive the following test cases:

1. Guarantee that all independent paths within a module have been exercised at least once.
2. Exercise all logical decisions on their true and false sides.
3. Execute all loops at their boundaries and within their operational bounds.
4. Exercise internal data structures to ensure the validity.
5. Identify which line of code is actually executed or which is not.
6. Indicate the missing logic or typo that lead into some negative consequences.

6.2 Unit Testing:

The unit testing is performed to test the validity of the individual units. This is done in the coding phase with the interactive testing. Thus it itself constitutes a majority of functionality test for each logical unit.

- **Integrity Testing**:

When all the development of all the units or modules is completed and integrated the integrity test phase is started. In this phase the interface and navigation between the modules are tested. This phase basically verifies whether inter module exchange of information and events are as per required system behavior.

6.3 Validation Testing :

Tests were performed to find conformity with the requirements. Plans and procedures were designed to ensure that all functional requirements are satisfied. The software was alpha-tested. There are two goals in preparing test plans. Firstly, a properly detailed test plan demonstrates that the program specifications are understood completely. Secondly, the test plan is used during program testing to prove the correctness of the program.

White Box Testing

Example:

Project Name	Online Submission System					
Test ID	1					
Testing Module	User Login loginID = {Valid loginID, invalid loginID, valid email, invalid email, empty} password = {valid, invalid, empty}					
Testing Method	Unit Testing					
Date	10/09/2015					
Name of Tester	Nazmi					
Description of Module	Login would be signing in by entering a correct username and password.					
Pre condition (If Any)	User needs to register before login.					
No.	**Test Input**	**Expected Result**	**Actual Result**	**Status (Success/ Fail)**	**Error**	**Correction Taken**
1.1	Valid loginID Login ID = "BI11111111", Password: "12345"	Display message "Welcome BI11111111"	Display message "Welcome BI11111111"	Success	No error.	N/A
1.2	Invalid loginID Login ID = "BI11111110", Password: "123" (Correct Username but wrong Password)	Display message: "Login ID and Password does not found. Please register before proceed to login"	Display blank page.	Fail.	Error message does not display correctly.	Revise the code, found typo in line 50 (see appendix 1.2), correct it and rerun the test.
1.3	Rerun test 1.2 Login ID = "BI11111111", Password: "123" (Correct Username but wrong Password)	Display message: "Login ID or Password does not found. Please register before proceed to login"	Display message "Login ID or Password does not found. Please register before proceed to login"	Success	No error.	N/A
1.4						
1.5						

Test Case Document (Black Box Testing)

Test ID/Version	
Testing Date	
Testing Method*	
Testing Module**	
Testing Description	
Pre condition (If Any)	

No.	Test Input	Expected Result	Actual Result	Status (S/F) S = Success F = Fail)	Error	Correction Taken
1.1	*Valid loginID* *Login ID = "BI11111111", Password: "12345"*	*Display message "Welcome BI11111111"*	*Display message "Welcome BI11111111"*	*Success*	*No error.*	*N/A*
1.2	*Invalid loginID* *Login ID = "BI11111110", Password: "123" (Correct Username but wrong Password)*	*Display message: "Login ID and Password does not found. Please register before proceed to login"*	*Display blank page.*	*Fail.*	*Error message does not display correctly .*	*Revise the code, found typo in line 50 (see appendix 1.2), correct it and rerun the test.*
1.3	*Rerun test 1.2* *Login ID = "BI11111111", Password: "123" (Correct Username but wrong Password)*	*Display message: "Login ID or Password does not found. Please register before proceed to login"*	*Display message "Login ID or Password does not found. Please register before proceed to login"*	*Success*	*No error.*	*N/A*
1.4						

***Testing method:** Integration Testing, System Testing & Acceptance Testing*

*** **Testing module:** Identify the module that you want to test. E.g: Admin interface – delete customer order.*

Black box testing applicable for :

- Incorrect or missing functions
- Interface errors
- Errors in data structures or external database access
- Behavior or performance errors
- Initialization and termination errors

User Acceptance Test

Testing is a set of activities conducted to facilitate discovery and/or evaluation of properties of one or more items under test. Each individual test, known as a test case, exercises a set of predefined test activities, developed to drive the execution of the test item to meet test objectives; including correct implementation, error identification, quality verification and other valued detail. The test environment is usually designed to be identical, or as close as possible, to the anticipated production environment. It includes all facilities, hardware, software, firmware, procedures and/or documentation intended for or used to perform the testing of software.

UAT test cases are ideally derived in collaboration with business customers, business analysts, testers, and developers. It's essential that these tests include both business logic tests as well as operational environment conditions. The business customers (product owners) are the primary stakeholders of these tests. As the test conditions successfully achieve their acceptance criteria, the stakeholders are reassured the development is progressing in the right direction.

UAT Checklist Template example:

USER ACCEPTANCE TEST

PROJECT NAME

Objective:

Name:

Circle which is preferred

5- Strongly Agree, 4- Agree, 3- Neutral, 2- Disagree, 1- Strongly Disagree

1. Are the interface satisfy you? 1 2 3 4 5
2. Are the web site is user friendly? 1 2 3 4 5
3. Other suggestion and idea.

_____

Result of the UAT must be compiled to show the average result on each question.

7.0 ASSESSMENT

FYP 1						
	Continuous Assessment (15%)	Report (15%)	Prototype (10%)	Final Presentation (5%)	Consultation (5%)	Marks (%)
Examiner 1	-	√	√	√	√	30
Examiner 2	-	√	√	√	√	30
Supervisor	√	√	√	-	-	40
Total						

Examiner 1: 25 %

Examiner 2: 25 %

Supervisor: 50%

FYP 2						
	Continuous Assessment (5%)	Report (10%)	Product (15%)	Presentation and Poster (5%)	Consultation (10%)	Marks
Examiner 1	-	√	√	√	-	30%
Examiner 2	-	√	√	√	-	30%
Supervisor	√	√	√	-	-	30%
Consultant	-	-	-	-	√	10%
Total						100%

7.1 Supervisor & Consultants Evaluations

Supervisor

Continuous Assessment	Meeting 1	Meeting 2	Meeting 3	Meeting 4	Meeting 5
5%	Week 1	Week 3	Week 6	Week 9	Week 12
Document: Student Log Book & Continuous Assessment Form					

Consultant

Consultation	Project I		Project II	
	Proposal	Logical Design	Prototype	Testing
10%	5%	5%	5%	5%
Document: Consultation Assessment Form				

Relative Relevance and Weights of Members of the FYP Evaluations:

Rank	Competence	Weight
1st	Examiner evaluation of final product	30%
2nd	Examiner evaluation of final report	20%
3rd	Supervisor evaluation of final product	15%
4th	Supervisor evaluation of final report	10%
5th	Examiner evaluation of oral presentation	10%
6th	Consultant evaluation of consultation phases	10%
7th	Supervisor evaluation of the continuous progress	5%

Report Evaluation:

FYP 1	Weightage
Abstract	5
Introduction	10
Literature and Application Review	20
System Analysis and Design	40
Conclusions	10
References	5
Appendices	5
Writing Style, Organization and Format	5
Total	**100 = 10%**

FYP 2	Weightage
Improvement from FYP 1	15
Software Development / Implementation	35
Software Evaluation / Testing	25
Conclusions	10
References	5
Appendices	5
Writing Style, Organization and Format	5
Total	**100 = 10%**

7.2 (a) SUPERVISOR/EXAMINER: Rubrics for Report FYP1 10%

Criteria	Exemplary	Accomplished	Poor	Marks
Abstract	**5 – 4** Abstract comprehends the implemented project and the writing style/language usage is good.	**3 – 2** Abstract comprehends the implemented project but the writing style/language usage is poor.	**1 – 0** Abstract does not comprehend the implemented project.	
Introduction	**10 – 7** Good introduction and contains interesting background information, problem statement, objective and project output.	**6 – 5** Good introduction and contains minimum background information, problem statement, objectives and project output.	**4 – 0** The introduction section is too brief and does not contain proper introduction, problem statement, and objectives and expected result.	
Literature Review	**10 - 7** Appropriate resources examined and covered in depth; significance of literature and applications reviewed.	**6 - 5** Some analysis and synthesis of ideas, discussed the relationship among key points found in the literature.	**4 – 0** Did not attempt to synthesize the information or discuss the topic in the broader context of scholarly literature.	
Application Review	**10 - 7** Appropriate resources examined and covered in depth; significance of literature and applications reviewed.	**6 - 5** Some analysis and synthesis of ideas, discussed the relationship among key points found in the literature.	**4 – 0** Did not attempt to synthesize the information or discuss the topic in the broader context of scholarly literature.	
Methodology	**10 - 7** Methodology is suitable, described properly.	**6 - 5** Methodology is suitable but does not describe properly.	**4 – 0** Methodology is not suitable, does not describe.	
Analysis	**10 – 7**	**6 - 5**	**4 – 0**	
DFD or UML	**10 - 7** System design is included with explanation of its adoption.	**6 - 5** Minimal system design is included.	**4 – 0** No system design.	
System Arc	**10 – 7** System arc and database design is suitable, described properly.	**6 - 5**	**4 – 0**	
Conclusion, Constraints and Suggestion	**15 – 11** Thorough conclusion, constraints and suggestion description.	**10 - 6** Conclusion, constraints and suggestion are described briefly.	**5 – 0** Conclusion is stated but without constraints and	

			suggestions.	
References	**5 – 4** References are provided and follow the standard and using the reference generator tool *i.e* Endnote.	**3 – 2** References are provided but only some follow the standard and using the reference generator tool *i.e* Endnote.	**1 – 0** References are provided but do not follow the standard and using inappropriate reference generator tool *i.e* Endnote.	
Appendices	**5 – 4** Appendices are thorough and appropriate.	**3 – 2** Appendices are fairly thorough and appropriate.	**1 – 0** Appendices are poor and inappropriate.	
Writing Style and Composition,	**5 – 4** Document is in APA format and follows Gaya Penulisan UMS guidelines. Document is written with correct grammar, punctuation and spelling.	**3 – 2** Manuscript conformed to most standards of APA format and Gaya Penulisan UMS. More than few spelling, punctuation and grammatical errors.	**1 – 0** Failure to apply standard rules of APA format and Gaya Penulisan UMS. Frequent spelling, punctuation and grammatical errors.	
Total				

******Turnitin Report must be included.***

7.2 (b) SUPERVISOR/EXAMINER: Rubrics for Report FYP2 10%

Criteria	Exemplary	Accomplished	Poor	Marks
Improvement from FYP1	**15 – 11** Feedbacks of previous assessments are being used for improvement and making changes as needed.	**10 - 6** Feedbacks of previous assessments are being used for improvement and making brief changes as needed.	**5 – 0** Feedbacks of previous assessments are partly being used for improvement and making improper changes as needed.	
Implementation	**20 - 15** Implementation is explained and thorough discussion is provided.	**14 - 7** Implementation is explained and brief discussion is provided.	**6 – 0** Implementation is stated briefly without discussion.	
Testing	**20 – 15** Software evaluation are properly designed, documented, and execute effective tests, accurately interpret the results, document any defects and modified as needed by end users.	**14 - 7** Software evaluation are properly designed, documented and execute appropriate tests, interpret the results, document any defects and modified briefly as needed by end users.	**6 – 0** Software evaluation are poorly designed, documented, execute inappropriate tests, interpret the results inappropriately, does not report any defects and making improper modification to end users.	
System Manual	**10 - 7** System manual is included with explanation of overall system.	**6 - 5** System manual is included with minimal explanation.	**4 – 0** No system manual.	
Conclusion, Constraints and Suggestion	**15 – 12** Thorough conclusion, constraints and suggestion description.	**11 - 8** Conclusion, constraints and suggestion are described briefly.	**7 – 0** Conclusion is stated but without constraints and suggestions.	
References	**5 – 4** References are provided and follow the standard and using the reference generator tool *i.e* Endnote.	**3 – 2** References are provided but only some follow the standard and using the reference generator tool *i.e* Endnote.	**1 – 0** References are provided but do not follow the standard and using inappropriate reference generator tool *i.e* Endnote.	
Appendices	**5 – 4** Appendices are thorough and appropriate.	**3 – 2** Appendices are fairly thorough and appropriate.	**1 – 0** Appendices are poor and inappropriate.	
Writing Style and Composition	**5 – 4** Document is in APA format and follows Gaya Penulisan UMS. Document is written with correct grammar, punctuation and spelling.	**3 – 2** Manuscript conformed to most standards of APA format and Gaya Penulisan UMS. More than few spelling, punctuation and grammatical errors.	**1 – 0** Failure to apply standard rules of APA format and Gaya Penulisan UMS. Frequent spelling, punctuation and grammatical errors.	
Total				

******Turnitin Report must be included.***

7.3 CONSULTANT: Rubrics for Proposal Evaluation FYP1 5%

Criteria	5 – 4 (Exemplary)	3 – 2 (Accomplished)	1 – 0 (Poor)	Marks
Project Scope	The scope is stated, suitable with bachelor degree and the project has achieved the stated scope.	The scope is stated but the project has achieved only some parts of the stated scope.	The scope is not stated or unsuitable with bachelor degree.	
Problem Statement	The problem statement is stated, suitable with bachelor degree and the project has addressed the stated problem statement.	The problem statement is stated and suitable but the project has not addressed the stated problem statement.	The problem statement is not stated and unsuitable with bachelor degree.	
Project Goal	The project goal is stated and suitable with bachelor degree.	The project goal is stated but unsuitable with bachelor degree.	The project goal is not stated or unsuitable.	
Objectives	The objective stated is suitable with bachelor degree and matches with the project goal.	The objective is stated but matches only some of the project goal.	The objective is not stated or unsuitable.	
Expected Result	The expected result stated is suitable and answers all the problem statement, goal and project objectives.	The expected result stated is suitable but only some of the expected result answers the problem statement, goal and project objective.	The expected result is not stated or unsuitable with the problem statement, goal and project objective.	
Development of ideas	Depth and complexity of ideas supported by rich, engaging and pertinent details, supported by relevant literature and application review.	Unelaborated idea development, unelaborated and repetitious of literature and application review.	Minimal idea development; limited and unrelated of literature and application review.	
Language	Precise and rich language.	Simplistic, effective language.	Incorrect and ineffective wording and sentence structure.	
Completeness and Accuracy	Proposal is complete and accurate description of important outcomes.	Proposal is incomplete, but accurate description of important outcomes.	Proposal is incomplete and inaccurate description of important outcomes.	
Presentation Skills	Student demonstrates excellent ability to respond to questions about proposed project.	Student demonstrates a fair ability to respond to questions about proposed project.	Student demonstrates no or little ability to respond to questions about proposed project.	
Total				

7.5 CONSULTANT: Rubric for Consultation Session FYP1 5%

Criteria	5 – 4 (Exemplary)	3 – 2 (Accomplished)	1 – 0 (Poor)	Marks
Identification of overall functional requirement	Black box, graphical model of the product. Inputs and outputs identified completely. Succinct statement of product function clearly identified.	Minor input and output flows are missing or misidentified. Statement of product function is present, but potentially misleading or awkward. A graphical representation of the model is employed.	Basic input and output flows are not identified. No graphical representation of information. Misidentified or missing statement of product function.	
Exploration of subfunction solutions	Extensive exploration of multiple product subfunctions through detailed graphical models. All product flows are correctly connected to functional models.	Major product subfunctions were identified and structured in a visual/ graphical representation. Connection between major input/output flows and subfunctions is established.	No consideration of product function was documented or was captured in a nongraphical form.	
Select subsystem design solution	Solution options are organized in a structure that adds to decision maker's understanding of the solution and to facilitate decision making process. Logic behind the selection of solutions is documented through a comparison to specs and other solutions.	A comparison of alternatives is modeled in a logical manner. Some selection criteria are incomplete with respect to the specs.	No clear logic is presented for concept selection. Selected concept may not be among the represented design alternatives.	
Composition of product architecture	Models of subfunction are composed into a complete functional representation. Geometry of subsolutions are outlined in a schematic form and sketched in a composite representation. The product architecture adds credibility to the solution as a whole.	A complete representation of the geometry is present which illustrates some interface problems. A composite functional representation is produced, but is incomplete or awkward.	A complete vision of the product function and geometry is not produced.	
Total				

7.6 SUPERVISOR/EXAMINER: Rubric for Prototype FYP 1 15%

Criteria	5 – 4 (Exemplary)	3 – 2 (Accomplished)	1 – 0 (Poor)	Marks
Originality	Working product has several relative/original/inventive elements and a clear potential for making creative contribution.	Working product has some creative/original/inventive element and some potential for making a creative contribution.	Working product is uninspired and straightforward work with little to no creative potential.	
Usability	GUI is well designed, consistent and optimizes learning. Rich internet applications (RIA) always complements.	GUI is not always consistent and appropriate. Rich Internet Application (RIA) often complements learning.	GUI id inconsistent, inappropriate and do not enhance learning.	
Database Design	Database design standards are followed extensively.	Database design standards are rarely followed.	Database Design standards are inconsistently followed.	
Contribution	The demonstration offered new information or approach about the application. The demonstration also showed strong effort was made in breaking new ground and building excitement about the application.	The demonstration offered some new information or approach about the application. The demonstration also showed initial effort was made in building excitement about the application.	The demonstration was not complete and offered no new information or approach about the application. The demonstration also showed that little effort was made in building excitement about the application.	
Completeness and Accuracy	The prototype is complete and accurately conveys the ideas to the user.	The prototype is incomplete, but accurately conveys the main ideas to the user.	The prototype failed to capture the main ideas to the user and is confusing in what was communicated.	
Total				

7.7 CONSULTANT: Rubric for Consultation Session FYP2 5%

Criteria	5 – 4 (Exemplary)	3 – 2 (Accomplished)	1 – 0 (Poor)	Marks
Usability	Users have an easy access to move in and out of different pages in the site.	Users are able to move in and out of web pages on the site without difficulties.	Users have a difficult time to find out how to move in and out of web pages on the site.	
Content Usefulness	Information or content is well organized so that it can be retrieved easily and quickly.	Information or content of the site is organized enough to search and find what's needed.	Information or content of the site is not organized and difficult to find.	
Interface design	The signs of successful visual layout are evident throughout the whole site.	Some signs of visual layout; e.g paragraphs are aligned, composition of picture and text is balanced, etc.	There is no regard to visual layout; alignment, typography, composition, etc.	
Pilot Testing	The system conform to all specifications and the system comply to the user requirement	The system conform to minimal specification and the system comply to minimal user requirement	The system does not comply to its specification and the system does not comply to the user requirement	
Total				

7.8 CONSULTANT: Rubric for Product Pre-Presentation FYP2 5%

Criteria	5 – 4 (Exemplary)	3 – 2 (Accomplished)	1 – 0 (Poor)	Marks
Fulfill the Objective in the Given Timeline	The project is completed and has extra features.	Part of the project complies with the objectives within deadline.	Project does not comply with the objective in the given timeline.	
Suitability of the design of Usability	The design complies with the bachelor expectation and meets all project objectives.	The design is suitable but does not comply with the project objectives.	The design is not suitable and does not comply with the project objectives.	
Competency in developing the system	Product fulfills all project objectives.	Product fulfills some of the project objectives.	Product does not meet the project objectives.	
Ability of system to handle the problem statement and project objectives	System is able to address problem statements and complies all of the project objectives.	System is able to address several problem statements and complies some of the project objectives.	System is not able to address problem statement and does not comply with the project objective.	
Functionality	Web application has consistent look and feel and perform all CRUD (create, read, update, delete) functions.	Web application has consistent look but will not carry out all CRUD functions.	Web display is not consistent and does not carry out CRUD functions.	
Testing on the system	No error in the system.	A few acceptable errors in the system.	Errors occurred and system failed to run.	
Creativity and uniqueness	Project is unique, creative and developed by the student.	Project is not unique, but modified and improved from the existing source with fair changes.	Project is not unique or plagiarized.	
Total				

7.9 SUPERVISOR / EXAMINER: Rubric for Product FYP2 15%

Criteria	5 – 4 (Exemplary)	3 – 2 (Accomplished)	1 – 0 (Poor)	Marks
Information Quality				
Suitability of the design of Usability(sys)	The design complies with the bachelor expectation and meets all project objectives.	The design is suitable but does not comply with the project objectives.	The design is not suitable and does not comply with the project objectives.	
Functionality (sys)	Web application has consistent look and feel and perform all CRUD (create, read, update, delete) functions.	Web application has consistent look but will not carry out all CRUD functions.	Web display is not consistent and does not carry out CRUD functions.	
Creativity and uniqueness (sys)	Project is unique, creative and developed by the student.	Project is not unique, but modified and improved from the existing source with fair changes.	Project is not unique or plagiarized.	
Reliability (Service)	No error in the system.	A few acceptable errors in the system.	Errors occurred and system failed to run.	
Fulfill the Objective in the Given Timeline	The project is completed and has extra features.	Part of the project complies with the objectives within deadline.	Project does not comply with the objective in the given timeline.	
Total				

7.10 EXAMINER: Rubric for Presentation FYP1 5%

Criteria	5 – 4 (Exemplary)	3 – 2 (Accomplished)	1 – 0 (Poor)	Marks
Project Knowledge	Student has presented knowledge and is at ease with information. Answers to questions are strengthened by rationalization and explanation.	Student has knowledge but uncomfortable with information. Seems novice and can answer without rationalization and explanation.	Student has no or very less knowledge about the project. Cannot answer the questions.	
Organization	Information articulated clearly and is organized in a structured way with logical flow between parts.	Information articulated clearly but it is difficult to follow the presentation.	Information is arranged in confused and unstructured way.	
Completeness and Accuracy	Complete, accurate description of important outcomes.	Incomplete, accurate description of important outcomes.	Incomplete, inaccurate description of important outcomes.	
Communication	Enthusiasm and confidence is exuded. Student demonstrates good volume and eye contact.	Light discomfort with public speaking is exuded. Student demonstrates fair volume and/or eye contact was broken with audience.	A high level of discomfort with public speaking is exuded. Student made distracting gestures with little or no audience eye contact.	
Time Management	The presentation fit into the time allotment.	The presentation slightly went over the time allotment.	The presentation went over the time allotment.	
Total				

7.11 EXAMINER: Rubric for Presentation FYP2 5%

Criteria	5 – 4 (Exemplary)	3 – 2 (Accomplished)	1 – 0 (Poor)	Marks
Project Knowledge	Student has presented knowledge and is at ease with information. Answers to questions are strengthened by rationalization and explanation.	Student has knowledge but uncomfortable with information. Seems novice and can answer without rationalization and explanation.	Student has no or very less knowledge about the project. Cannot answer the questions.	
Organization	Information articulated clearly and is organized in a structured way with logical flow between parts.	Information articulated clearly but it is difficult to follow the presentation.	Information is arranged in confused and unstructured way.	
Completeness and Accuracy	Complete, accurate description of important outcomes.	Incomplete, accurate description of important outcomes.	Incomplete, inaccurate description of important outcomes.	
Communication	Enthusiasm and confidence is exuded. Student demonstrates good volume and eye contact.	Light discomfort with public speaking is exuded. Student demonstrates fair volume and/or eye contact was broken with audience.	A high level of discomfort with public speaking is exuded. Student made distracting gestures with little or no audience eye contact.	
Time Management	The presentation fit into the time allotment.	The presentation slightly went over the time allotment.	The presentation went over the time allotment.	
Poster	Clearly explain (complete) significant information (Graphic clarity, Relevancy of information, require element and attractiveness)	Most complete of significant information in term of Graphic clarity, Relevancy of information, require element and attractiveness	Missing significant information in term of Graphic clarity, Relevancy of information, require element and attractiveness	
Total				

7.12 SUPERVISOR: Rubric for Continuous Assessment 5%

Criteria	5 – 4 (Exemplary)	3 – 2 (Accomplished)	1 – 0 (Poor)	Marks
Regularity	Student has kept continuous contact during the work and has been on time both to meetings and in sending deliverables.	Student has been late to meetings or in sending deliverables on agreed dates. The supervisor had to prompt the students with questions about the status of the work.	Student has a serious problem with keeping agreed to meeting and deadlines. Supervisor has not been able to get the status of the work during the project.	
Independence	Student has independently managed the project and carried out the work.	Supervisor has given a lot of help to the students in managing the project and carrying out the work.	Supervisor had to manage the project and direct the students in carrying out the work.	
Contribution	Student is making an excellent progress on project and demonstrating initiative to complete the project in time.	Student is making fair progress on project and demonstrating acceptable initiative to complete the project in time.	Student is making no or little progress on project and demonstrating no or little initiative to complete the project in time.	
Total				

******Refer to Student Log Book.***

8.0 STUDENT LOG BOOK

A student log book is an academic reference that provides details related to supervisory meetings and to keep track the progress of student's project development plan and results. Student and supervisor are required to work closely and have regular meetings (minimum of 5 meetings referring to ***6.1 Supervisor & Consultants Evaluations***) during the semester.

The Log Book should be maintained and kept by the student, with copies of meeting notes given to the supervisor for the records. The record of a standard meeting should give a summary of:

a) The date of the meeting.
b) The focus of the discussion set at the meeting.
c) The summary on student's progress made by a supervisor.
d) The actions set for the next meeting.
e) Summary of supervisor's feedback on the student's overall performance.
f) Signature from both student and supervisor.

The Log Book must be submitted together with the FYP report to the supervisor as it is part of the continuous assessment requirement.

UNIVERSITI MALAYSIA SABAH

FACULTY OF COMPUTING AND INFORMATICS

Final Year Project

Student Log Book

Project Title

_____

_____

_____

_____

_____

Student Info

Name :
Matric No :
Email :
Mobile No :
Course Code :

Supervisor Info

Supervisor :
Co-Supervisor (if applicable) :

UNIVERSITI MALAYSIA SABAH
FACULTY OF COMPUTING AND INFORMATICS

STUDENT LOG BOOK NOTES

1) This log book needs to be used by students taking FYP 1 and FYP 2.

2) It is the responsibility of the student that this log book is **kept up to date** and that the student complies with the Supervisor's suggestions and recommendations as noted by the student in the log book and approved by the Supervisor.

3) Student **MUST** make a regular meeting with a supervisor at least ONCE in TWO WEEKS. A minimum number of meetings are **5 times per semester**.

4) Supervisor with advice from FYP Coordinator and Consultants has the right not to allow the student to present their project if this regulation is not complied.

5) The Log Book must be submitted together with the FYP report to the supervisor as it is part of the continuous assessment requirement

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FACULTY OF COMPUTING AND INFORMATICS

LOG BOOK

Semester : _____

Date : Meeting : 1 / 2 / 3 / 4 / 5 / 6

Student (Meeting Minute/ Achievements/ Activities) : _____

Supervisor (Suggestion & Comments) : _____

Next Meeting Plan : _____

Supervisor's Signature: _____ Date: _____

Universiti Malaysia Sabah

INDUSTRIAL TRAINING GUIDELINE

Faculty of Computing and Informatics

2022

TABLE OF CONTENT

1 GENERAL INFORMATION

1.1 Introduction

This industrial training is executed at the **second semester (2)** for each final year students which registers as a full-time student at the Faculty of Computing and Informatics (FCI) - Universiti Malaysia Sabah (UMS). Industrial training is a complement course for students' academic programme, and it enable student to achieve a bachelor's degree with Honour.

This industrial training fulfils UMS desire to:

- Provide a prepared and capable graduate to experience a real working environment whether in academic or non-academic field with spirit and high professional appearance.
- Provide a course programme with theoretical and practical in line with current situation which stresses efficiencies and deluxe management.

1.2 Objective

The objective of industrial training is in line with a few UMS objectives, especially:

- Achieve an academic scholar excellence, equivalent as international in variety programme field.
- Explore, preserve, and benefit the knowledge effectively to the development of society and nation in line with the University's and Nation's aspiration.
- Have an educational program, research, and quality and relevant practical work to the society and country.
- Carry out close cooperative relationship between UMS with industrial sector, government, professional bodies as well as society.

1.3 Status and Credit Hours

Industrial training compelled to all student which registers full-time undergraduate study and given **twelve (12) credit hours**. Industrial training's student performance will be calculated in student's accumulative grade (CGPA) to get a bachelor's degree with honour.

1.4 Duration

The duration of industrial training is **twenty four (24) weeks**.

1.5 Industrial Training Procedure

Before the industrial training, student has to complete the following forms:

- Industrial Training Placement Choices Form (**BLI-1**)
- Student Information Form (**BLI-2**)

During the industrial training, student has to complete the following forms:

- Industrial training commencement form (**BLI-3**)

- ❖ Industrial Training Weekly Report (**BLI-5**) as a daily activity record at training site with a supervision of industrial supervisor.

- ❖ Provide one industrial training final report by using the format provided by FCI (**BLI-6**) on the final week of industrial training or on the given due date to respective academic supervisor.

- ❖ Industrial Training Checklist (**BLI-8**)

1.6 Industry Supervisor Roles

1. Supervision of student's work at the organisation is done by the industry's supervisor, an executive at the organisation where students is placed. The industry supervisor is pointed on agreement between FCI and the organisation management. He/she is responsible in ensuring the student is performing their task/work completely in given time.

2. The industry supervisor roles include:

   - ❖ A discussion with the academic supervisor on matters that related to student work placements and performances during the industrial training.
   - ❖ Industrial training performance evaluation will be carrying out at the end of the training. The evaluations include:
     - o Work performance (for example: punctuality, work, quality, time management, readiness in accepting any given task)
     - o Appearance (for example: clothes, speech, behaviour).
     - o Management (for example: relationship between employee and employer, ability to solve problems).
     - o Work or given task must be related to course which were taken at the university.
     - o Presence/attendance and students' aptitude performance evaluation at the end of the training.

3. Industrial Supervisor should check and verify student's weekly report and return it back to the student on the first day of work for following week.

4. Fill in the Supervisor Evaluation Form (**BLI-7**) and submit to the academic supervisor (during their visit). Need to be reminded that the form is **CONFIDENTIAL**.

1.7 Academic Supervisor Roles

1. A lecturer shall be designated by FCI as an academic supervisor. Academic supervisor responsible on providing advisory services to students undergo the industrial training.

2. Academic supervisor will visit the organization where student is stationed and meet with industry supervisor at least once during the industrial training period.

3. Besides that, academic supervisor will also evaluate students' performance in the organization and their training program.

4. Student's performance is evaluated in the following aspect:

- ❖ Student attitude (for example: received a proposal from industry supervisor or academic supervisor, willingness work and learn, ability to interact between employee and employer, appearance).

- ❖ Students Performance (for example: capability to adapt with/in the organization, self-confidence, and valuing task).

- ❖ Management (for example: time management, preparation of the report).

5. Discuss with the industry supervisor on student's work performance.

6. Examine and evaluate student report on training.

1.8 Evaluations

Student will be evaluated based on:

- ❖ Industry Supervisor 45%
- ❖ Academic Supervisor 15%
- ❖ Final report & Logbook 40%

2 INSTRUCTION TO STUDENT

1. You are required to report to the responsible officer in the organization that has been identified and designated by FCI as industry supervisor.

2. You should understand and obey all organization rules.

3. When reporting and undergo industrial training, you should always well-dressed, and comply with organization ethics dressed (for example, wear tie, safety clothes)

4. Come to work immediately before office hours. Always comply with office time in and out. If you are out of station, required to be somewhere else, give up a note / message. Fully utilize the working hours by doing something benefited.

5. Bare in mind that organization/ private agency and government working hours was different. For organization / private agency sometimes you are required to work on Sunday or work overtime. When this happen, you are required to show your cooperate attitude and prove your capability to meet your requirement of duty.

6. You should always do all task seriously and enthusiastically, sincere whether in directed or not. If you are facing any problems, discuss with your industrial supervisor. If forced, contact your respective academic supervisor for help.

7. When given a task, you should do immediately, suitable with quality, standard and organization's requirement. For this purpose, you are advised to read and collect your organization information for details.

8. You must be friendly, speak politely, prepared and do not be afraid to ask if you do not know of something.

9. You are required to record all training activities and daily duties as weekly log. You need to state the task and date for each activity. This record must be included as attachment with the final report (after being confirmed by industry supervisor) to academic supervisor.

10. All products carried out during industrial training should be filing orderly to be appended with your final report.

11. Any changes in your work schedule for instance you have to take emergency leave, you should inform your industry supervisor first and seek for his approval.

12. During your industrial training, you are protected by group insurance provided by UMS.

13. If you are ill or need medical check/health care, you could go to any nearby government hospital/clinic or get treatment in private clinic. All treatment receipt should be kept for claim purpose.

14. Industry training organization is not responsible for paying daily allowance, travel allowance or your accommodation during the industrial training.

15. You should be ready to welcome your academic supervisor at any time and be prepared to explain to him/her about the training that you had been carried out.

16. As a student of UMS, you are carrying the image of UMS. Therefore, you are expected to always behave in a way which demonstrates respect for the faculty and University.

17. If there is any problem that is difficult to be overcome, please contact your academic supervisor at the soonest.

3 GENERAL GUIDELINE PREPARING THE INDUSTRIAL TRAINING FINAL REPORT

1. Students are required to provide one copy of final report at the end of the industrial training.

2. The report needs to be written according to its reader group. It should be logical presented with constructive arguments to convince reader to the conclusions of the report.

3. This report must be completed during the final week of the industrial training. However, students are advised to gather all information and start writing earlier.

4. Weekly activities report may be use as a reference in making/writing the final report.

5. A complete report needs to be confirmed by industry supervisor in the first place before being submitted to the academic supervisor.

6. The report must be following FCI's report format.

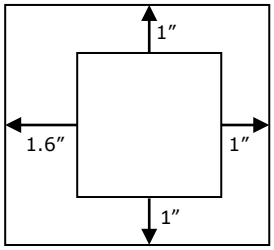
7. Report may be written in Bahasa Malaysia or English (overall).

4 REPORT WRITING FORMAT FOR INDUSTRIAL TRAINING

1. Report must be type clearly at:
    a. 'A4' size paper
    b. 1 sided only

c. 1.5 line spacing

2. For each page, page indentation as given below, must be followed.



3. Page number must be situated at the bottom and middle of the document.

4. Spoiled pages on your report because of unclean amendment will be rejected and the student needs to replace it.

5. Any font size and type can be used as long as your report can be read easily and it must be applied consistently.

6. Every report must contain:

❖ **One page of abstract**

A summary of industrial training program and knowledge learned the student achieved from it. This section should not more than 200 words.

❖ **Acknowledgement**

This section contains your appreciation to those who helped, involved in the completion of the program.

❖ **List of Figures**

❖ **List of Tables**

The early part must be number with a small roman capital letter such as (i), (ii), (iii) etc. Place at the middle of the page, and 25 mm far from the page side.

❖ **Introduction**

- A brief introduction about the training organization including their activities, number of staff, organizational structure, and others.
- Industrial training summary.

❖ **Full report** must contain things that had been done by the student during the training together with problems their facing throughout the program. The detail content can be written as followed:

- Type of work being done – things like designing, analysing, maintenance, development, supervising, trouble shooting and others.
- The relation between task/work done and course taken during their study at the university.
- Things being taught from supervisor, staffs, books during the industrial training.

- Software, hardware, tools that been used to complete the industrial training program.
- Total and category of staff who involved in completing the given task.
- Time duration for completing the given tasks.
- University's theoretical and practical knowledge that been used/applied in conducting the given task.
- Problems occur during work.
- Summary and conclusion for the whole work being done.

❖ **Conclusion and recommendation**

In this part, students need to summarise their experience, lesson learned, problems and solution, opinion and recommendation to improve the program in the future.

❖ **Appendix**

- If there is any, it must be place at the end of the reports. The appendix must be really related to the program.
- Each figure, chart, picture must have a title or brief explanation.

UMS
UNIVERSITI MALAYSIA SABAH

FACULTY OF COMPUTING & INFORMATICS
FAKULTI KOMPUTERAN DAN INFORMATIK

Buku Panduan Sistem Mentor-Mentee Fakulti Komputeran dan Informatik (FKI)

Disediakan oleh Penyelaras Hal-Ehwal Pelajar FKI *2022*
Diulas oleh Timbalan Dekan Akademik dan Hal Ehwal Pelajar FKI 2022
Disemak oleh AJK Permeriksaan dan Permurnian SOP Sept 2022
Tahun 2022 (Version 1:15 Sept 2022)

Kandungan

1. Pengenalan Sistem Mentor-mentee FKI

1.1 Sistem Mentor-mentee FKI

Sistem mentor-mentee di Fakulti Komputeran dan Informatik (FKI), Universiti Malaysia Sabah merupakan satu inisiatif fakulti untuk membantu para pelajar dan memberikan keperihatinan dalam persekitaran pembelajaran pelajar. Sistem ini merupakan sistem penasihatan antara para akademik FKI dengan pelajar.

1.2 Objektif Sistem Mentor-mentee FKI

Sistem mentor-mentee ini bertujuan untuk:

- memantapkan sistem penasihatan pensyarah kepada pelajar yang dilaksanakan di FKI.
- mewujudkan prosedur operasi standard (SOP) dalam sistem penasihatan pensyarah kepada pelajar FKI agar nasihat dan cadangan dapat disampaikan kepada para pelajar dengan berkesan, selaras dan bertanggungjawab.
- membantu para pelajar dalam mengatasi masalah berkaitan hal-hal ehwal akademik dan pelajar.
- mewujudkan suasana yang sihat agar dapat membantu melahirkan pelajar yang berprestasi akademik cemerlang serta kemahiran insaniah dan nilai-nilai murni yang baik.

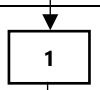
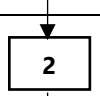
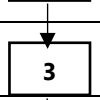
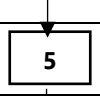
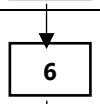
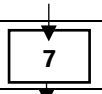
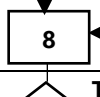
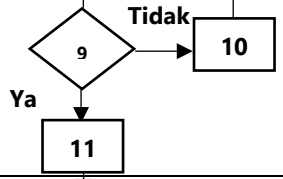
1.3 Pelaksanaan Sistem Mentor-mentee FKI

Pelaksanaan sistem ini dilakukan oleh pensyarah-pensyarah akademik (mentor) FKI kepada pelajar-pelajar (mentee) yang berdaftar di FKI. Mentor dan mentee akan ditetapkan oleh Unit Akademik FKI pada semester pertama tahun pengajian pertama. Penetapan mentor-mentee ini akan berkekalan sehingga ke tahun akhir pengajian pelajar. Nisbah mentor kepada mentee adalah ditetapkan mengikut jumlah kemasukan pelajar dibahagikan jumlah pensyarah dalam program pengajian. Walaubagaimanapun, Jumlah pelajar yang dipertanggungjawabkan di bawah setiap mentor hendaklah **tidak melebihi** daripada **50 orang** mentee bagi satu tahun pengajian itu.

Semua perjumpaan rasmi antara mentor dan mentee mesti dilakukan secara temu janji atau keadah-kaedah lain. Perjumpaan boleh dijalankan secara berkumpulan ataupun individu secara bersemuka ataupun atas talian, mengikut kesesuaian masing-masing. Segala butiran perbincangan semasa perjumpaan tersebut perlu direkodkan menggunakan borang **"FKI Mentor Mentee Meeting Report"**.

Adalah menjadi tanggungjawab mentee untuk mengemukakan maklumat-maklumat akademik terkini dan yang dianggap penting untuk mentor dan pihak fakulti. Bahagian 1.4 menerangkan bagaimana proses perjumpaan mentor-mentee FKI dilaksanakan.

1.4 Prosedur Operasi Standard (SOP) Sistem Mentor-mentee FKI

Carta Alir	Proses Kerja	Dokumen	Tindakan/Tanggungjawab
	Mula		
	1. Arahan pengagihan mentee kepada mentor		TDA
	2. Agihan mentor kepada mentee-mentee		Ketua Program
	3. Agihan senarai mentor dan mentee kepada pelajar dan pensyarah		Unit Akademik dan HEP FKI
	4. Arahan sesi perjumpaan dan penghantaran rekod perjumpaan	i. Templat Laporan Perjumpaan ii. Borang "My Study KPI"	TDA Unit Akademik dan HEP FKI
	5. Sesi perjumpaan dilaksanakan		Pensyarah (Mentor) dan Pelajar (Mentee)
	6. Pengisian atau pengemaskinian "My Study KPI" serta penghantaran semula kepada mentor		Pelajar (Mentee)
	7. Pengisian Laporan Perjumpaan		Pensyarah (Mentor)
	8. Penghantaran Laporan Perjumpaan kepada Unit Akademik dan HEP FKI	i. Laporan Perjumpaan yang lengkap	Pensyarah (Mentor)
	9. Penerimaan Laporan Perjumpaan 10. Peringatan penghantaran Laporan Perjumpaan kepada staff pentadbiran HEP 11. Kompilasikan Laporan Perjumpaan semua mentor.		Unit Akademik dan HEP FKI
	Selesai		

1.5 Unit Akademik

Unit Akademik perlu menyediakan senarai nama mentor dan mentee fakulti yang mengandungi butiran-butiran seperti di bawah bagi tujuan kemudahan untuk dihubungi. Penyediaan senarai nama (mentee) kepada pensyarah disarankan mengikut susunan tahun/semester semasa pelajar.

i. Agihan senarai nama mentee kepada pensyarah seharusnya mengandungi butiran berikut bagi tujuan kemudahan dihubungi:
Nama Pelajar, No. Matrik Pelajar, No. Telefon, Alamat Email

ii. Agihan senarai nama mentor kepada pelajar seharusnya mengandungi butiran berikut bagi tujuan kemudahan dihubungi:
Nama Pensyarah, No. Telefon, Alamat Email

Unit Akademik juga perlu menyediakan maklumat pautan laman sesawang (website) yang berkaitan dengan informasi peraturan dan sistem akademik, kemudahan dan kebajikan pelajar untuk rujukan. Pautan maklumat ini boleh disertakan dalam senarai nama mentor dan mentee fakulti. Selain daripada pautan sesawang ke "**Kaedah Pengajian Prasiswazah Universiti Malaysia Sabah** di https://bpa.ums.edu.my", pautan maklumat bantuan kewangan, informasi khidmat kaunseling dan sebagainya disarankan untuk disertakan dalam templat senarai nama mentor dan mentee

2. Tugas and Peranan Mentor-Mentee

2.1 Mentor/Penasihat Akademik

Mentor atau penasihat akademik merupakan pensyarah akademik FKI yang aktif dan telah ditentukan kepada pelajar yang berdaftar dari semester pertama pengajian. Tugas mentor adalah untuk:

i. membantu pelajar memahami dan peka terhadap Peraturan Akademik Universiti dan Peperiksaan Universiti.
ii. memberi khidmat nasihat dan bimbingan kepada pelajar mengenai pendaftaran subjek, kemudahan gugur/tambah subjek dan tarik diri.
iii. memantau perkembangan akademik semua pelajar di bawah seliaannya termasuk membimbing dalam membantu dan membuat perancangan pembelajaran akademik, penglibatan dalam aktiviti-aktiviti universiti, kepimpinan, motivasi dan sebagainya.
iv. memberi khidmat nasihat dan bimbingan kepada pelajar yang bermasalah seperti masalah lulus bersyarat dan tangguh pengajian yang mempengaruhi perancangan akademik pelajar.
v. memantau rekod pelajar menggunakan borang "**My Study KPI**" yang perlu diisi pada setiap awal semester serta masalah lain seperti kesihatan, peribadi dan tatatertib.

Berikut merupakan peranan-peranan Mentor kepada pelajar seliaan:

i. mengadakan perjumpaan dengan pelajar.
ii. memastikan pelajar memahami sistem akademik UMS.
iii. memberi nasihat mengenai pendaftaran subjek pelajar.
iv. memastikan pendaftaran subjek pelajar berpandukan stuktur program FKI dan juga kepada pencapaian semasa.
v. memantau perkembangan akademik pelajar dan membantu supaya pelajar membuat perancangn pembelajaran yang baik dan teratur.
vi. menasihati pelajar agar lebih bermotivasi dan meneruskan pengajian hingga akhir.
vii. memantau rekod "**My Study KPI"** pelajar serta dokumen-dokumen berkaitan agar sentiasa dikemaskinikan dan mudah diperolehi.
viii. merujuk pelajar kepada bahagian-bahagian yang tertentu, sekiranya perlu.

2.2 Mentee/Pelajar

Mentee merupakan pelajar yang berdaftar dengan mana-mana program di FKI, UMS. Mentor memainkan peranan penting dalam sistem mentor-mentee FKI agar dapat membantu dan memberi manfaat kepada mentee dalam pembelajaran sepanjang pengajian. Mentee bertanggungjawab untuk berjumpa dengan mentor sekerap yang boleh agar dapat mewujudkan ekosistem mentor-mentee yang baik. Mentee dan mentor akan

ditentukan oleh pihak fakulti dan akan dimaklumkan kepada para pelajar setelah mendaftar masuk universiti. Antara peranan mentee adalah:

i. berjumpa dengan mentor dengan lebih kerap.
ii. memperolehi khidmat nasihat dari mentor dengan sifat hati terbuka.
iii. memahami sistem akademik UMS.
iv. bertanggungjawab mengemaskinikan borang "**My Study KPI**" dan memberikan salinan kepada mentor.
v. sekiranya menghadapi masalah berkaitan akademik, kesihatan atau peribadi yang membebankan pembelajaran, mentee boleh mendapatkan nasihat daripada mentor.
vi. menyerahkan salinan keputusan peperiksaan kepada mentor, sekiranya perlu.

3. Panduan Untuk Mentor/Penasihat Akademik

3.1 Mengadakan perjumpaan dengan pelajar

Mentor dinasihatkan untuk mengadakan sekurang-kurangnya sekali perjumpaan sepanjang semester agar dapat tahu status keberadaan dan situasi pelajar dalam hal ehwal akademik mahupun aktiviti-aktiviti lain. Perjumpaan boleh dijalankan secara berkumpulan ataupun individu secara bersemuka ataupun atas talian.

Pada minggu **pertama pengajian** (kemasukan pelajar baru), disarankan mentor untuk:

i. berjumpa dan mengenali mentee yang telah ditetapkan oleh fakulti melalui sesi pengenalan.
ii. membincang mengenai perancangan akademik pelajar dan proses pendaftaran subjek.
iii. menerangkan proses gugur/tambah subjek, proses tarik diri subjek serta takwim akademik.
iv. membimbing pelajar untuk mengisi dan melengkapkan borang "**My Study KPI**" serta maklumat peribadi pelajar.

Pada minggu pertama **setiap semester** sepanjang pengajian, disarankan mentor untuk:

i. berjumpa dengan mentee untuk mengetahui keberadaan dan situasi mentee.
ii. membincang mengenai perkembangan dan pencapaian akademik mentee dan seterusnya merancang aktiviti akademik untuk semester tersebut.
iii. mengingatkan mentee untuk mengemaskinikan borang "**My Study KPI**" serta maklumat peribadi pelajar untuk kegunaan kecemasan dan sebagainya.
iv. memberi nasihat yang berkaitan serta motivasi untuk meningkatkan diri dalam pengajian.
v. membincangkan masalah-masalah yang dihadapi oleh mentee sepanjang pengajian dan merujuk pelajar kepada bahagian-bahagian yang tertentu sekiranya perlu.

3.2 Memastikan Pelajar Memahami Sistem Akademik UMS

Mentor perlu memastikan bahawa setiap pelajar di bawah seliaannya dibekalkan dengan buku panduan sistem akademik UMS iaitu "**Kaedah Pengajian Prasiswazah Universiti Malaysia Sabah**" yang boleh dimuatturun dari laman sesawang https://bpa.ums.edu.my. Mentor perlu membincangkan perkara-perkara penting secara terperinci agar mentee dapat memahaminya. Antaranya termasuk tempoh pengajian yang dibenarkan, tempoh gugur/tambah subjek, tempoh tarik diri, penilaian gred, dan lain-lain.

3.3 Memastikan Pendaftaran Subjek Mentee berdasarkan Stuktur Program

Mentor perlu memastikan bahawa mentee mendaftar subjek berdasarkan panduan struktur program fakulti yang disediakan oleh ketua program. Dengan merujuk pada panduan tersebut mentor dapat merancang dan menerangkan subjek yang perlu didaftar per

semester dan jumlah jam kredit yang perlu diambil oleh mentee. Namun perancangan ini juga berdasarkan pencapaian semasa mentee yang diselia.

Bagi mentee yang bermasalah seperti memperolehi subjek gagal atau lemah (cth; gred D), mentor perlu memberitahu kesan-kesan subjek gagal, menggugurkan subjek, menarik diri subjek, pematuhan peraturan-peraturan akademik dan cara membaiki CGPA mentee untuk lebih baik dan cemerlang.

Mentor juga perlu memberi bantuan kepada mentee untuk menyusun semula perancangan subjek berdasarkan panduan stuktur program yang didaftar sekiranya mentee ingin membaiki Nilai Purata Gred Keseluruhan (NPGK). Dengan ini agar mentee dapat belajar dengan teratur dan meneruskan pembelajaran dengan lebih baik.

3.4 Memantau Perkembangan Akademik dan Aktiviti Mentee

Selain daripada memantau perkembangan akademik, mentor juga perlu memantau sahsiah pelajar melalui aktiviti-aktiviti pelajar di dalam dan luar fakulti. Pemantauan ini dilakukan dengan mengingatkan pelajar untuk mengemaskinikan borang "**My Study KPI**". Bagi kemasukkan pelajar yang baru iaitu semester pertama pengajian, mentor perlu membimbing pelajar mengisi dan menerangkan perkara-perkara di dalam borang "My Study KPI" seperti pencapaian aktiviti-aktiviti pelajar, pertandingan yang disertai, perkembangan kebarangkalian untuk *Graduate on Time* dan lain-lain lagi. Borang "**My Study KPI**" perlu dibekalkan kepada pelajar semasa sesi pengenalan minggu pertama pengajian.

3.5 Memberi Nasihat dan Motivasi kepada Mentee

Mentor sepatutnya memberi dorongan dan motivasi kepada pelajar mengenai akademik supaya pelajar mencapai kecemerlangan. Mentor juga perlu menegaskan kepada pelajar betapa pentingnya pencapaian NPGK yang tinggi dan sahsiah untuk masa depan serta kerjaya pelajar.

3.6 Menghantar Borang

Mentor bertanggungjawab mengumpul dan hantarkan borang "**My Study KPI**" kepada Unit Akademik dan HEP pada atau selewat-lewatnya minggu ke-empat setiap semester selepas berjumpa dengan pelajar.

4. Panduan Untuk Mentee/ Pelajar

4.1 Kekerapan Berjumpa Dengan Mentor

Mentee adalah digalakkan berjumpa dengan mentor sekurang-kurangnya sekali sepanjang semester ataupun mengikut budi bicara mentor itu sendiri.

Pada minggu **pertama pengajian** (kemasukkan pelajar baru) disarankan mentee untuk:

i. berjumpa dan mengenali mentor yang telah ditetapan fakulti.
ii. mengisi dan melengkapkan borang "**My Study KPI**" serta maklumat peribadi pelajar.
iii. membincang mengenai perancangan akademik dan proses pendaftaran subjek.
iv. Sekiranya dalam semester tersebut mentee ingin gugur/ tambah subjek, mentee dinasihati berjumpa dan berbincang dengan mentor terlebih dahulu sebelum minggu ke-empat.
v. mentee dinasihati berjumpa dan berbincang dengan mentor sekiranya mentee ingin menarik diri kursus atau program.

Pada minggu pertama **setiap semester** sepanjang pengajian disarankan mentee untuk:

i. berjumpa dengan mentor.
ii. mengemaskinikan borang "My Study KPI" serta maklumat peribadi pelajar.
vi. membincang mengenai perkembangan dan pencapaian akademik dengan mentor dan seterusnya merancang aktiviti akademik untuk semester tersebut.
vii. Sekiranya dalam semester tersebut mentee ingin gugur/ tambah subjek, mentee dinasihati berjumpa dan berbincang dengan mentor terlebih dahulu sebelum minggu ke-empat.
viii. mentee dinasihati berjumpa dan berbincang dengan mentor sekiranya mentee ingin menarik diri kursus atau program.

4.2 Memahami Sistem Akademik UMS

Mentee boleh merujuk kepada mentor mengenai sistem akademik universiti namun mentee perlu memahami sistem akademik UMS daripada buku "**Kaedah Pengajian Prasiswazah Universiti Malaysia Sabah**" yang boleh dimuat turun dari laman sesawang https://bpa.ums.edu.my. Antara perkara berkaitan akademik termasuklah takwim semester, pendaftaran kursus, pengecualian kursus, gugur/tambah kursus, tangguh pengajian dan lain-lain.

4.3 Mengisi dan melengkapkan borang "My Study KPI"

Bagi kemasukan pelajar baru, mentee perlu mendapatkan borang **"My Study KPI"** daripada mentor yang ditentukan. Mentee boleh merujuk kepada mentor untuk mendapatkan bimbingan mengisi borang tersebut atau untuk memahami perkara-perkara dalam borang tersebut. Setelah lengkap, sesalinan borang ini perlulah diberikan kepada mentor untuk

direkodkan. Salinan utama akan disimpan oleh mentee untuk merekodkan prestasi sepanjang semester.

Bagi pelajar yang lama, mentee perlu mengemaskinikan borang **"My Study KPI"** tersebut semasa atau setelah perjumpaan dengan mentor. Kemudian mentee perlu menghantar sesalinan borang **"My Study KPI"** yang sudah dikemaskini kepada mentor sebagai rekod.

4.4 Menyerahkan Salinan Keputusan Peperiksaan

Adalah menjadi tanggunjawab mentee untuk menyerahkan salinan keputusan peperiksaan semester pada awal setiap semester untuk disimpan dan direkodkan mentor. Tujuan penyimpanan rekod ini adalah untuk membolehkan mentor mengetahui prestasi akademik pelajar dan mengambil tindakan jika keputusan mentee didapati mempunyai masalah. Rekod ini juga akan digunakan oleh mentor, Ketua Program, Penyelaras Projek Tahun Akhir, atau Penyelaras Latihan Industri apabila mereka diminta menulis surat sokongan pelajar.

5. Dokumen-dokumen berkaitan

5.1 Borang My Study KPI

FAKULTI KOMPUTERAN DAN INFORMATIK
FACULTY OF COMPUTING AND INFORMATICS

MY STUDY KPI			
SUTDENT NAME		STUDENT ID	
PROGRAM		E-MAIL	
INTAKE BATCH	e.g., 2020	PHONE NO (LATE	
MENTOR NAME		STATE OF ORIGIN	
HOME ADDRESS			

STUDY MOTTO :	

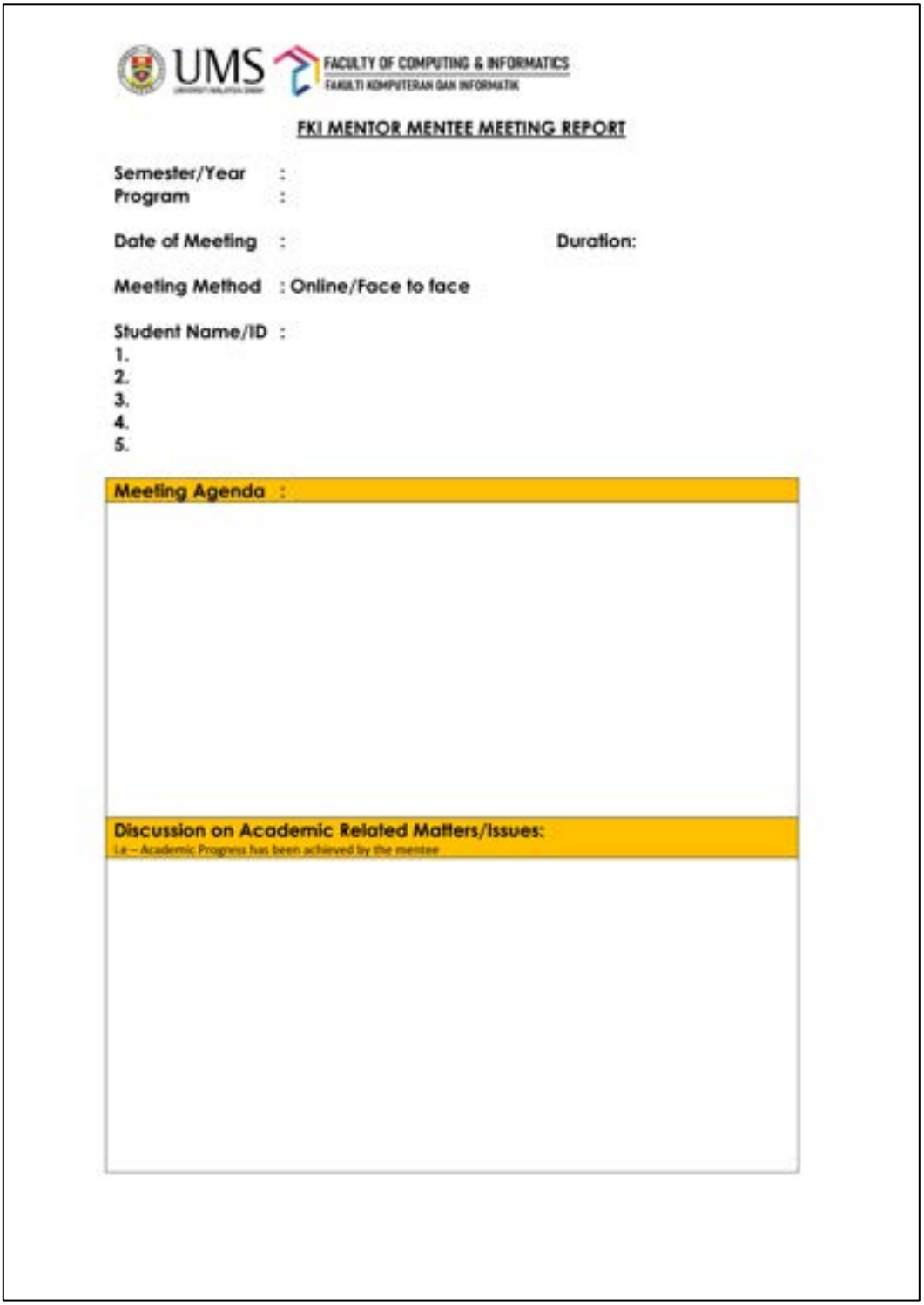
NO	INDICATORS	FACULTY'S KPI	STUDENT'S AIM	SEM 1/ YEAR 1	SEM 2/ YEAR 1	SEM 1/ YEAR 2	SEM 2/ YEAR 2	SEM 1/ YEAR 3	SEM 2/ YEAR 3	SEM 1/ YEAR 4	SEM 2/ YEAR 4	REMARK
1	CGP	≥3.00		e.g., 3.33								
2	STUDENT ACTIVITIES											
	Faculty Level	4		e.g., 0 or 1								
	University Level	4		e.g., 0 or 1								
	National Level	1		e.g., 0 or 1								
	International Level	1		e.g., 0 or 1								
3	COMPETITION											
	Faculty Level	2		e.g., 0 or 1								
	University Level	2		e.g., 0 or 1								
	National Level	1		e.g., 0 or 1								
	International Level	1		e.g., 0 or 1								
4	LEADERSHIP *As a higher committee member or normal committee member*	2		e.g., 0 or 1								
5	GRADUATE AIM *Graduate on Time*	On Time		e.g., On Schedule								
6	PROFESIONAL CERTIFICATION	≥ 1		e.g., 0 or 1								
7	EMPLOYABILITY	Within 3 months after Industrial Training										
8	MOBILITY PROGR	1		e.g., 0 or 1								

CHALLENGES AND PLANS AHEAD				
NO	SEM/YEAR	CHALLENGES	FUTURE PLAN	REMARKS
1	e.g., Sem1/Year 1	e.g., Studying at home during Covid distracted me from focusing.	e.g., Apply to stay in campus	
2				
3				
4				
5				

LIST OF STUDENT ACTIVITIES/ CLUB/ ASSOCIATION/ COMPETITION			
NO	SEM/YEAR	NAME OF ACTIVITIES/ CLUB/ ASSOCIATION/ COMPETITION	REMARKS
1	e.g., Sem1/Year 1	e.g., Persatuan Mahasiswa FKI KK	e.g., AJK Publisiti
2			
3			
4			
5			
6			
7			
8			

**Remember to update this document frequently and submit it to your Mentor for recording purpose.*

5.2 Borang Laporan Perjumpaan "FKI Mentor Mentee Meeting Report"



UMS FACULTY OF COMPUTING & INFORMATICS
FAKULTI KOMPUTERAN DAN INFORMATIK

FKI MENTOR MENTEE MEETING REPORT

Semester/Year :
Program :

Date of Meeting : Duration:

Meeting Method : Online/Face to face

Student Name/ID :
1.
2.
3.
4.
5.

Meeting Agenda :

Discussion on Academic Related Matters/Issues:
i.e – Academic Progress has been achieved by the mentee

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FAKULTI KOMPUTERAN DAN INFORMATIK

Actions: List any actions agreed from this meeting and who will carry them out

Do you have any concerns (E.g. wellbeing or safeguarding) or further comments?

Mentor Name	Signature	Date

Bahagian Hal Ehwal Pelajar (HEP)

Program Mentor Mentee FKI
*Rujukan 'Buku Panduan Sistem Mentor-Mentee FKI'.

1.1 Program ini merupakan inisiatif fakulti untuk membantu para pelajar dan memberikan nasihat dan keperihatinan dalam persekitaran pembelajaran pelajar pada setiap semester.

1.2 Pensyarah akan ditetapkan selaku mentor oleh Unit Akademik FKI kepada sejumlah pelajar (dirujuk sebagai mentee) seawal semester pertama tahun pengajian pertama pelajar. Penetapan mentor-mentee ini akan berkekalan sehingga ke tahun akhir pengajian pelajar.

1.3 Tugas utama pensyarah sewaktu perlaksanaan program ini adalah untuk menasihat pelajar berkenaan perihal akademik dan kebajikan melalui perjumpaan bersama pelajar.

1.4 Semua perjumpaan rasmi antara mentor dan mentee mesti dilakukan mengikut tarikh atau tempoh yang ditetapkan oleh fakulti. Perjumpaan boleh dilakukan secara temu janji atau kaedah-kaedah lain yang bersesuaian (bersemuka ataupun atas talian), samada secara berkumpulan ataupun individu.

1.5 Pensyarah boleh merujuk kepada buku panduan rasmi bagi mengenali tugas dan peranan mentor serta kaedah perlaksanaan secara terperinci.

1.6 Pensyarah boleh merujuk proses utama mentor daripada carta alir rasmi SOP Sistem Mentor-Mentee FKI yang dilabelkan seperti berikut.

Carta Alir	Proses Kerja	Dokumen	Tindakan/Tanggungjawab
	Mula		
1	1. Arahan pengagihan mentee kepada mentor		TDA
2	2. Agihan mentor kepada mentee-mentee		Ketua Program
3	3. Agihan senarai mentor dan mentee kepada pelajar dan pensyarah		Unit Akademik dan HEP FKI
4	4. Arahan sesi perjumpaan dan penghantaran rekod perjumpaan	i. Templat Laporan Perjumpaan ii. Borang "My Study KPI"	TDA Unit Akademik dan HEP FKI
5	5. Sesi perjumpaan dilaksanakan		Pensyarah (Mentor) dan Pelajar (Mentee)
6	6. Pengisian atau pengemaskinian "My Study KPI" serta penghantaran semula kepada mentor		Pelajar (Mentee)
7	7. Pengisian Laporan Perjumpaan		Pensyarah (Mentor)
8	8. Penghantaran Laporan Perjumpaan kepada Unit Akademik dan HEP FKI	i. Laporan Perjumpaan yang lengkap	Pensyarah (Mentor)
Tidak 10 / Ya 11	9. Penerimaan Laporan Perjumpaan 10. Peringatan penghantaran Laporan Perjumpaan kepada staff pentadbiran HEP 11. Kompilasikan Laporan Perjumpaan semua mentor		Unit Akademik dan HEP FKI
	Selesai		

Rajah 1: Carta Alir SOP Sistem Mentor-Mentee FKI

1.7 Selain dari tugas dan peranan mentor, pensyarah juga disarankan untuk melaksanakan perkara-perkara berikut sewaktu perjumpaan bersama mentee:

- Memperkenalkan penggunaan sistem atau aplikasi utama akademik seperti SMPB, ITEL UMS, OBE UMS.
- Maklum dengan sebarang bentuk tajaan biasiswa atau pinjaman pendidikan yang telah diambil pelajar.
- Memperingatkan kepentingan pendaftaran kursus, penilaian kursus, dan tatacara peperiksaan akhir UMS.

SECTION POSTGRADUATE & INTERNATIONAL

DR. NOORALISA MOHD TUAH

Deputy Dean (Postgraduate & International)

Tel : 087-503000 ext. 101495
e-mail : alisa.tuah@ums.edu.my

JUNAIDAH BT. LAMJAN

Senior Administrative Assistant Officer (N32)

Tel : 088-320000 ext. 101159
e-mail : june4g@ums.edu.my

JUNAINAH BINTI YUNUS

Administrative Assistant (N19)

Tel : 087-503000 ext. 102614
e-mail : jun@ums.edu.my

PROGRAMMES OFFERED

POSTGRADUATE

- ☑ Doctor of Philosophy (Ph.D)
  - Computer Science
  - Information Technology

- ☑ Master of Science [By Research]
  - Computer Science
  - Information Technology

- ☑ Master of Computer Science [By Coursework]
  - Computational Intelligence Software
  - Software Development

- ☑ Master of Information Systems [By Mixed Mode]
  - Information Systems

POSTGRADUATE STUDY HANDBOOK
FACULTY OF COMPUTING AND INFORMATICS
UNIVERSITI MALAYSIA SABAH

First Edition

2024

Table of Contents

1. INTRODUCTION

1.1 Welcome Message from the Dean

Dear Students,

Thank you for considering the graduate programmes at the Faculty of Computing and Informatics (FCI), Universiti Malaysia Sabah (UMS). This handbook will provide you with an overview of our campus, the degree programmes we offer, and the associated costs of graduate study.

Informatics and computing hold a special place in graduate education. Our libraries, computer laboratories, and dedicated faculty create a conducive environment for a dynamic and enriching academic experience. We are deeply committed to providing opportunities for a diverse population, with programmes that are enhanced by the rich cultural, economic, and educational backgrounds of our students, faculty, and staff.

Beyond academics, the Informatics programme at our Labuan campus offers a visually stunning environment close to the serene and breathtaking South China Sea. Meanwhile, the Computing programme at our Kota Kinabalu campus provides access to city events, including poetry readings, concerts, theatre performances, lectures, and a wide range of outdoor and sporting activities.

Choosing the right place for your graduate studies is a significant decision. I encourage you to explore our programmes in Informatics at Labuan and Computing at Kota Kinabalu. If possible, visit our campuses, meet our students, and speak with our faculty members. If an in-person visit is not feasible, please reach out to a faculty member in your field of study to learn more about the facilities and resources available to you.

I hope you find that our programmes offer the breadth and vision you seek in a graduate education and that you will consider becoming part of our dynamic academic community.

Feel free to ask us questions via the contact form on our website or visit us directly at our faculty.

I look forward to getting to know each of you personally, so please stop by and say hello.

Best Regards,

Assoc. Prof. Ts. Dr. Mohd Hanafi bin Ahmad Hijazi

Dean, Faculty of Computing and Informatics

1.2 Faculty Overview

The Faculty of Computing and Informatics (FCI), originally known as the Labuan School of Informatics Science (LSIS), was established in May 1999 to offer programmes in computing and information technology. In October 2003, UMS was recognized by the Multimedia Development Corporation (MDeC) for its ICT-facilitated business programmes, which use multimedia technologies to enhance products and services.

On June 1, 2014, LSIS was restructured and renamed LSIS to FCI. Three computer science programmes from the School of Engineering and Information Technology (SEIT) were incorporated into FCI. The faculty now offers five undergraduate programmes:

- Bachelor of Computer Science with Honours (Software Engineering)
- Bachelor of Computer Science with Honours (Network Engineering)
- Bachelor of Information Technology with Honours (Multimedia Technology)
- Bachelor of Information Technology with Honours (Business Computing)
- Bachelor of Computer Science with Honours (Data Science)

FCI also offers postgraduate programmes designed to advance knowledge and skills, preparing students for high-level careers in academia and industry. These programmes provide specialized education in computer science and information technology, fostering cutting-edge research and development. They enhance career prospects by equipping students with advanced problem-solving and critical thinking skills, essential for leadership roles. By promoting interdisciplinary collaboration and lifelong learning, FCI ensures graduates can adapt to the evolving computing landscape. Additionally, these programmes contribute to societal advancement by developing technologies that address real-world problems and support economic growth through skilled professionals driving global innovation. The postgraduate programmes include:

- Master of Science (Computer Science) by Research
- Master of Science (Information Technology) by Research
- Master of Information System by Mixed Mode
- Master of Computer Science (Computational Intelligence) by Coursework
- Master of Computer Science (Software Development) by Coursework
- Doctor of Philosophy in Computer Science by Research
- Doctor of Philosophy in Information Technology by Research

The growth in information technology and computing is pivotal in everyday activities. Therefore, mastering this knowledge is essential for effective information dissemination, realizing the integrated role of information and communication technology in creating a borderless world.

1.3 Faculty Vision, Mission and Objectives

Vision:

To be a leading faculty in computing and informatics recognized for excellence in education, research, and community engagement.

Mission:

A global standing in scholarly learning and innovation through teaching, research, publication and social contribution for the development of holistic human capital.

Objectives:

- To produce quality graduates in computing and informatics with sustainable academic programs.
- To increase the number of graduates with professional skill certification.
- To strive for the visibility of the faculty through high impact research and publication.
- To establish professional relationship with the industries and public sectors in computing and informatics through innovation, collaboration and consultancy.

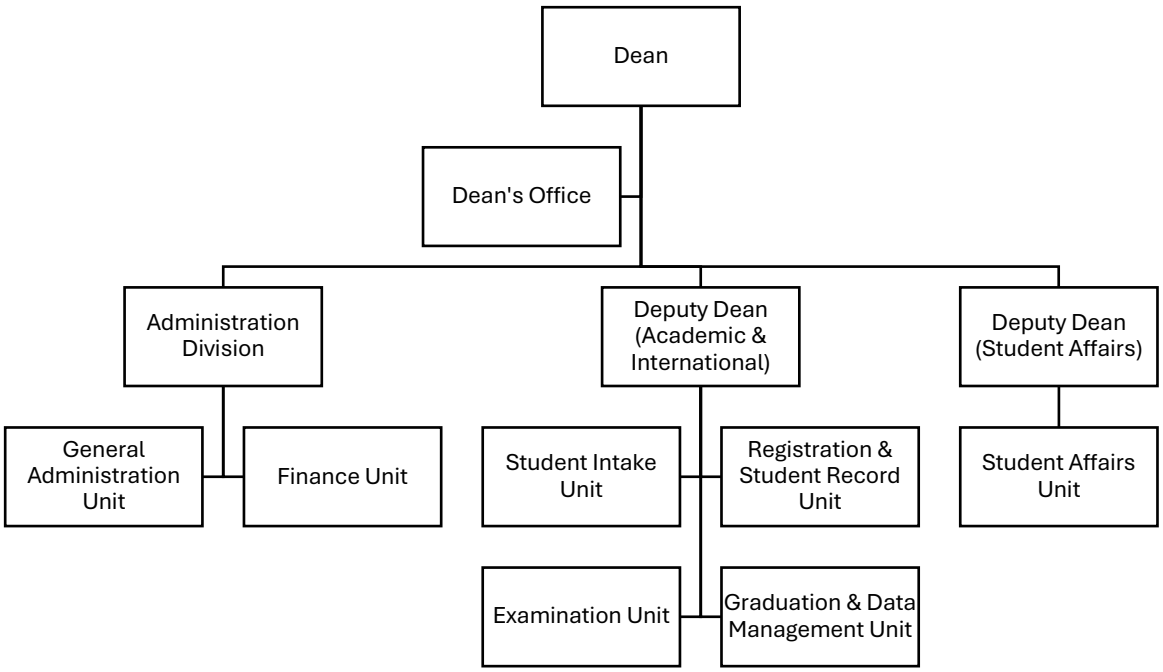
2. MANAGEMENT

2.1 University Level

At the university level, the Centre for Postgraduate Studies at UMS oversees the administration and coordination of all postgraduate programs across the university. Its primary roles include:

- Developing and implementing postgraduate policies and regulations.
- Managing admissions, enrolments, and graduation processes for postgraduate students.
- Providing support and resources for postgraduate research and education.
- Ensuring the quality and standards of postgraduate programs are maintained.
- Facilitating academic and professional development opportunities for postgraduate students.

The following chart shows the organization chart in the Centre for Postgraduate Studies at UMS.

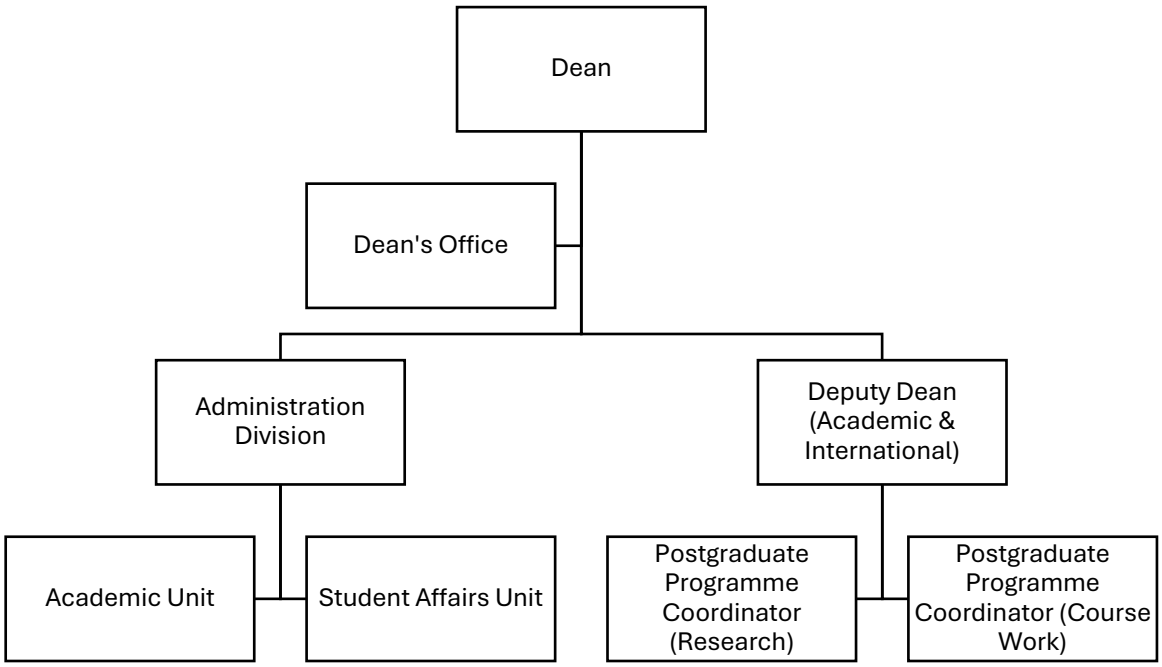


2.2 Faculty Level

The Postgraduate Section at the FCI specifically manages the postgraduate programs offered by the faculty. Its main roles include:

- Administering and coordinating FCI's postgraduate programs in computer science and information technology.
- Assisting with admissions, course registrations, and academic advising for FCI postgraduate students.
- Supporting faculty-specific research initiatives and providing resources for student research projects.
- Organizing seminars, workshops, and events to enhance the academic experience of postgraduate students within FCI.
- Monitoring the progress and performance of FCI postgraduate students to ensure timely completion of their studies.

The following chart shows the organization chart in the Postgraduate Section at FCI, UMS.



2.3 Relation Between Management at University and Faculty Level

Centre of Postgraduate Studies, UMS	**Postgraduate Section at FCI**
Examination Unit	Academic Unit
Graduation & Data Management Unit	
Student Intake Unit	Student Affairs Unit
Registration & Student Record Unit	
Student Affairs Unit	

3. ACADEMIC EXCELLENCE

3.1 Professor

No.	Title	Name	Research Area
1	Prof.	AG. ASRI BIN AG. IBRAHIM	Auditory Display, Multimedia System, Computing Technology.
2	Prof.	JASON TEO TZE WI	Neuroinformatic, Biophysical Signal Processing, Evolutionary Computation.
3	Prof.	RAYNER ALFRED	Ubiquitous Big Data Analytics, Sustainable Smart Farming / Agriculture, Big Data Analytics for Security, Biodiversity & Healthcare.

3.2 Associate Professor

No.	Title	Name	Research Area
1	Assoc. Prof.	AZALI BIN SAUDI	Computer Vision for Intelligent Robotics, Action Recognition, Image Recognition, Machine Learning, Deep Learning, Path Planning, Finite Difference Method.
2	Assoc. Prof.	CHIN KIM ON	Machine Learning & Big Data Analytics, Smart Agriculture, Sentiment Analysis.
3	Assoc. Prof.	GOH SAY LENG	Combinatorial Optimization, Operations Research, Meta-heuristics.
4	Assoc. Prof.	LEAU YU BENG	Internet & Telecommunication Security, Data & Information Security, Future Internet Architecture & Internet of Things.
5	Assoc. Prof.	MOHD. HANAFI BIN AHMAD HIJAZI	Image Analysis & Understanding, Smart Agriculture, Sentiment Analysis.
6	Assoc. Prof.	MUZAFFAR BIN HAMZAH	Virtual Citizenship, Visual Analytics, Information Retrieval, Information Visualization, Blockchain.

7	Assoc. Prof.	NG GIAP WENG	Augmented / Virtual Reality, Interactive Multimedia System, Human-Computer Interaction / Human Factors.
8	Assoc. Prof.	SAMSUL ARIFFIN BIN ABDUL KARIM	Intelligence Computing / Numerical Analysis / Computer Aided Geometric Design / Computer Graphics, Machine Learning, Deep Learning, Big Data Analytics & Statistical Learning, Spline, Wavelet, Optimization, Signal & Image Processing, Weak Signal, Unmanned Aerial Vehicle.
9	Assoc. Prof.	SYED NASIRIN BIN SYED ZAINOL ABIDIN	Decision Support System Implementation, Simulation Modelling, Clinical Decision Support System (Healthcare).

3.3 Senior Lecturer

No.	**Title**	**Name**	**Research Area**
1	Dr.	CAROLYN BT. SALIMUN@JACKSON	Visual Aesthetics in Human-Computer Interaction.
2	Dr.	CHIN PEI YEE	Organizational Disruptive / Collaborative Technologies Appropriation, E-Commerce / Mobile Commerce / Social Commerce, Information System, Human Behaviour.
3	Dr.	DINNA@ NINA BT. MOHD. NIZAM	Game & Play (Digital Education Games, Gamification, Digital Learning), Novel Interactions (Augmented Reality, Virtual Reality, Eye-tracking, Physiological Sensors), Human Information Interaction (User Experience, Usability, Decision Making).
4	Dr.	ERVIN GUBIN MOUNG	Machine Learning (Reinforcement, Supervised, Unsupervised), Object

			Detection (Computer Vision to Locate Instances of Objects in Images or Videos), Quantum Machine Learning, Quantum Computing-based Machine Learning.
5	Dr.	ESMADI ABU BIN ABU SEMAN	Business-IT Alignment / Digital Transformation / Technology Management, Community Informatics / Educational Technology / Gamification, E-Commerce / Mobile Commerce / Social Commerce.
6	Dr.	FARASHAZILLAH BINTI YAHYA	Data Management / Data Analytics, Environmental Informatics, Cybersecurity.
7	Dr.	FLORENCE SIA FUI SZE	Data Mining / Machine Learning, Evolutionary Optimization.
8	Dr.	SEYED HAMID TALEBIAN	Data Science, Data Mining, Machine Learning, Deep Learning, Natural Language Processing
9	Dr.	GOHAR RAHMAN	-
10	Dr.	JACKEL CHEW VUI LUNG	Numerical Analysis, Statistical Modelling & Analysis.
11	Dr.	JAMES MOUNTSTEPHENS	Psychologically-Inspired Computing, Natural Language Processing, Image Processing.
12	Dr.	KHALIFA CHEKIMA	Artificial Intelligence, Machine Learning, Natural Language Processing, Sentiment Analysis, Big Data Analytics.
13	Dr.	LAI PO HUNG	Text Mining with Machine Learning, Natural Language Processing, Social Media Text Processing (Sentiment Analysis / Emotion Detection / Depression Detection).

14	Dr.	MOHAMMAD FADHLI BIN ASLI	Visual Analytics, Information Design, Information Visualization.
15	Dr.	MOHAMMED AHMED MOHAMMED SALEH	Artificial Intelligence, Computer Vision, Information Security.
16	Dr.	NOORALISA BINTI MOHD TUAH	Serious Games, Gamification, Creative Computing.
17	Dr.	NORAZLINA BINTI KHAMIS	Intelligent Software Engineering, Smart City, Requirements Engineering & Software Testing.
18	Ts.	NORDIN SAAD	Task Scheduling Techniques for Fog Computing.
19	Dr.	NUR FARAHA BTE HJ. MOHD NAIM	Human-Computer Interaction, UX/UI with Kansei Engineering Approach, Mobile Learning.
20	Dr.	RAYNER @ HENRY PAILUS	Artificial Intelligence, Machine Learning, Computer Vision / Image Processing, Data Management / Data Analytics
21	Sir	RYAN MACDONELL ANDRIAS	Adaptive Gamification.
22	Dr.	SALMAH BINTI FATTAH	Sensor Networks, Underwater Wireless Sensor Networks, Wireless Sensor Networks, Network System & Performance, Internet of Underwater Things, Multi-objective Optimization, Meta-heuristic Algorithm.
23	Dr.	SAMRY@MOHD SHAMRIE SAININ	Machine Learning (Ensemble Meta Classifiers), Pattern Recognition (Speech & Image), Deep Learning (Neural Machine Translation).
24	Sir	SOFFRI BIN YUSSOF	Strategic Open Innovation, Business Model Innovation, Information Technology Project Management.

25	Dr.	SUAINI BINTI SURA	Electronic Commerce / Social Commerce / Smart Commerce (with Data Mining), Social Computing (with Data Mining), Information System Internet / Human Behaviour.
26	Dr.	SURAYA BINTI ALIAS	Natural Language Processing (Text Analytics, Sentiment Mining, Text Summarization), Artificial Intelligence (Pattern Mining), Machine Learning, Software Application Development & Testing.
27	Dr.	TAMRIN BIN AMBOALA	Business Information System, Incubation & Commercialization for Computing & Engineering Artefacts, Participatory Action Research, Rural Broadband, Business Process Reengineering Sharia Compliant for E-commerce Transactions, Digital Divide.
28	Dr.	TAN SOO FUN	Information Security, Data Security, Network Security, Cybersecurity, Cryptography, Lightweight Security Solutions for Internet of Things, Cloud Computing, Outsourced Big Data Analytics, Image Processing, Post-quantum / Quantum Resistant Cryptography, Quantum based Communication Protocols.
29	Dr.	WAN NOORAISHYA BINTI WAN AHMAD	Human-Computer Interaction, Persuasive Technology, Multimedia Computing.
30	Dr.	ZAIDATOL HASLINDA BINTI ABDULLAH SANI	Human-Computer Interaction, User Experience, Human Behaviour & Technology, Designing for Ageing, Digital Tourism / Healthcare / Education.

3.4 Lecturer

No.	Title	Name	Research Area
1	Sir.	AHMAD RIZAL BIN AHMAD RODZUAN	Creative Digital Content Solution, Emotional Engagement in Digital Media.
2	Mdm.	AINNUR HAFIZAH BINTI ANUAR MOKHTAR	Cybersecurity, Information Security.
3	Mdm.	DG SENANDONG AJOR	Knowledge Discovery & Data Mining, Management Information System (with Data Analytics).
4	Mdm.	HADZARIAH BINTI ISMAIL	Requirements Engineering, Knowledge Management in Requirements Engineering, System Modelling for Requirements Engineering.
5	Mdm.	IZA AZURA AHMAD BAHAR	Decision Support System Optimization, Task Scheduling, Genetic Algorithm.
6	Mdm.	NONA MASNIE MOHD NISTAH	-
7	Mdm.	NURAINI JAMIL	-
8	Mdm.	SHALIZA HAYATI A. WAHAB	Path Planning for Unmanned Aerial Vehicle, Numerical Method, Network Performance.

4. DEGREES OFFERED

4.1 Master Programme by Research

Master of Science (Computer Science)

This programme aims to produce Computer Science specialists

1. with advanced knowledge in the field of study and capable of adopting the best methodologies and techniques to provide innovative solutions for current issues in Computer Science,
2. with leadership skills who can communicate and interact effectively with diverse stakeholders,
3. who have positive attitudes, engage in lifelong learning activities, and have an entrepreneurial mindset for successful careers, and
4. who uphold and defend ethical and professional practices in maintaining self and professional integrity.

Master of Science (Information Technology)

This programme aims to produce Information Technology specialists

1. with advanced knowledge in the field of study and capable of adopting the best methodologies and techniques to provide innovative solutions for current issues in Information Technology,
2. with leadership skills who can communicate and interact effectively with diverse stakeholders,
3. who have positive attitudes, engage in lifelong learning activities, and have an entrepreneurial mindset for successful careers, and
4. who uphold and defend ethical and professional practices in maintaining self and professional integrity.

4.1.1 Admission Requirements

i. A Bachelor's degree (Level 6, MQF) in Computing or related fields with a minimum CGPA of 3.00, as accepted by the university Senate; OR

ii. A Bachelor's degree (Level 6, MQF) in Computing or related fields with a minimum CGPA of 2.00 and not meeting a CGPA of 3.00 can be accepted subject to a thorough rigorous assessment by the faculty; OR

iii. A Bachelor's degree (Level 6, MQF) in Non-Computing field with a minimum CGPA of 2.50 can be accepted subject to a thorough rigorous assessment by the faculty to identify the appropriate prerequisite courses that equivalent to their working experience in the Computing or related fields; OR

iv. A Bachelor's degree (Level 6, MQF) in Non-Computing field with a minimum CGPA of 2.50 can be accepted subject to appropriate prerequisite courses; OR

v. Other qualifications equivalent to a Bachelor's degree (Level 6, MQF) in Computing or related fields recognised by the Government of Malaysia must fulfil the requirement on item i or ii.

4.1.2 English Proficiency Requirements (International Candidate Only)

(a) International applicants or non-English speaking countries applicants must achieve a minimum of Band 4 in MUET or equivalent to CEFR (Low B2) such as Band 5.5 in IELTS, score of 46 in TOEFL iBT and score of 51 in PTE; OR

(b) Fulfil the general language requirement outlined by the university.

4.1.3 Graduate on Time Schedule

Semester	Activities	Milestones	Assessments
1	• Attend Research Methodology Course • Write research proposal • Learn to use reference manager software (Mendeley) and document preparation system (LaTeX)	• Pass Research Methodology Course • Pass Proposal Defence • Pass Progress Report	• Research Methodology Course • Proposal Defence • Progress Report
2	• Write dissertation chapter 1, 2 and 3 (Introduction, Literature Review and Methodology) • Attend Research Literacy Course • Write review/survey paper	• Submit review/survey paper to a Scopus/WoS indexed journal • Pass Progress Report	• Progress Presentation • Progress Report

3	• Conduct experiment or field work • Write dissertation chapter 4 (Results and Findings) • Attend Research Literacy Course	• Present research work at a conference • Pass Progress Report	• Progress Presentation • Progress Report
4	• Write dissertation chapter 5 (Conclusion) • Write journal article • Prepare a complete dissertation	• Submit article to a Scopus/WoS indexed journal • Submit Dissertation	• Pre-Viva • Viva Voce • Dissertation

4.2 Master Programme by Mixed Mode

4.2.1 Master of Information System

4.2.2.1 Study Duration

	Full-time	Part-time
No. of Weeks	17	17
No. of Semesters	3	4
No. of Years	1.5	2

4.2.2.2 Programme Educational Objectives

- To cultivate computing practitioners with advanced knowledge in diverse fields of study, adept at adopting cutting-edge methodologies and techniques to deliver innovative solutions for the dynamic challenges in computing.
- To develop computing practitioners who possess leadership skills and excel in effective communication and interaction with diverse stakeholders.
- To foster computing practitioners who embody positive attitudes, actively engage in lifelong learning activities, and embrace an entrepreneurial mindset, paving the way for a successful and fulfilling career.
- To cultivate computing practitioners who actively embrace and champion ethical and professional practices, diligently preserving their integrity and chosen field.

4.2.2.3 Programme Learning Outcomes

At the end of the programme, the graduates should be able to:

- Demonstrate knowledge and systematics understanding of facts, concepts, and principles in Information Systems and their relationship with other related disciplines and theories related to Information Systems.
- Use relevant techniques, demonstrate analytical and critical thinking skills in solving problems, and propose innovative approaches using existing theories, methodologies, and practices.
- Apply knowledge in unfamiliar contexts to produce transformative solutions by planning and conducting effective research based on information systems theories.
- Demonstrate interpersonal and social strength in managing information system problems for society and the environment.
- Communicate effectively with all occupations and demonstrate the ability to work in a team and be responsible for managing information system-related problems.
- Using digital technology skills in solving information system problems.
- Apply deep mathematical skills in solving information system problems.
- Led an information system project while analysing and planning solutions to information system problems.
- Strengthen personal strengths comprehensively in communication, leadership and decision-making related to information systems.
- Strengthen entrepreneurial creativity through business opportunities related to information systems.
- Practising critical ethical dimensions, managing ethical implications, and working professionally.

4.2.2.4 Course Offered

IS70103 Information Systems Research Methods

To equip students to appreciate the principles of modern research methodologies fully. Strong emphasis is placed upon the process of translating real-world IS research problems using qualitative and quantitative research methods. In addition, the students are expected to develop critical responses to the existing IS theoretical discourses, methodologies or practices.

IS70203 Datalogy

The module introduces the fundamentals of data concepts and methods with a data engineering orientation. It is a subfield of data science responsible for designing, building, and maintaining data infrastructure to collect, process, store, and deliver data to be used and analyzed big data. Students will explore and taught the differences between a data engineer and a data scientist, get an overview of the various data development and implementation methods and tools data engineers may use (e.g., database systems including SQL and noSQL, data warehousing solutions, ETL Tools, machine learning, Data APIs, Knowledge of algorithms and data structures) and expand these understanding further.

IS70303 Information Systems Models & Theories

To enable students to appreciate multiple perspectives of IS models and theories fully. Emphasis is placed upon the understanding of these models and methods from different viewpoints of the organisational stakeholders. The students are expected to design and undertake substantial investigations to address significant IS theory and practice areas.

IS70403 Smart Information Systems

The comprehensive understanding of smart information systems acquired through the covered topics empowers students to apply their knowledge and skills to real-world scenarios. By considering the ethical and legal aspects, they can ensure the responsible and compliant use of smart information systems, safeguarding privacy, security, and fairness. Additionally, staying up-to-date with future trends and challenges enables professionals to remain relevant and innovative in an ever-evolving landscape. In Malaysia, smart information systems are applied across various industries and sectors, offering numerous job opportunities.

IS70514 Dissertation 1

The students will carry out original master level studies (equivalent to MQF Level 7) on areas relating to the program. The students are expected to design and undertake substantial investigations to address significant areas of IS theory and practice. They are also expected to Select appropriate advanced methodological approaches and critically evaluates their effectiveness. These substantial investigations, arranged through a chosen advanced methodological approach, would need to be successfully defended (i.e., master thesis viva-voce).

IS70614 Dissertation 1

For the research project, you will carry out original master level studies on a subject relating to the program. Our research topics are aligned with the research interests of the faculty. In addition, other research project topics will also be proposed by the academic staff, focusing on cutting edge research issues in these industries.

4.3 Master Programme by Coursework

4.3.1 Master of Computer Science (Software Development)

The programme aims to provide graduates with the advanced knowledge and opportunity to pursue, in depth, the solution of Computer Science with specialization in Software Development.

4.3.1.1 Study Duration

	Full-time	Part-time
No. of Weeks	17	17
No. of Semesters	3	5
No. of Years	1.5	2.5

4.3.1.2 Programme Educational Objectives

- Computer Science specialists with advanced knowledge, applying enhanced technical and numeracy skills and focusing in the field of software development to provide innovative solutions in computing.
- Computer Science specialists with leadership skills and good interpersonal and communication skills to interact with stakeholders effectively.
- Computer Science specialists who engage and advocate lifelong learning activities and have an entrepreneurial mindset.
- Computer Science specialists who uphold and defend ethical conduct, professional practices and issues in maintaining integrity.

4.3.1.3 Programme Learning Outcomes

At the end of the programme, the graduates should be able to:

- Integrate advanced knowledge with specialization in software development concerning issues in computing.
- Recommend innovative solutions that are at the forefront of developments in software development.

- Construct software development solutions and tools in terms of their usability, efficiency and effectiveness.
- Demonstrate effective interaction within a group and with a diverse audience through project discussions and participation in discourses related to software development.
- Exhibit effective communication within a group and with a diverse audience by publishing and presenting technical materials in software development.
- Utilise digital skills to acquire, interpret and extend knowledge in software development.
- Apply numerical skills to acquire, interpret and extend knowledge in software development.
- Demonstrate leadership, teamwork, autonomy and responsibility in delivering services related to software development.
- Exhibit capabilities to extend relevant knowledge through life-long learning in software development.
- Exhibit capabilities of having an entrepreneurial mindset to the related to software development.
- Uphold professional and ethical practices in conducting research and delivering services related to software development.

4.3.1.4 Course Offered

KI51103 Algorithm and Analysis

This course covers major algorithms and data structures for searching and sorting, graphs, and analysis in optimization techniques. It also covers the concepts of algorithm complexity to solve various problems in different domains.

KI51203 Research Methods in Computer Science

This course will introduce the research environment in Computer Science to the students. The main stages of conducting research are covered that include choosing a research topic, writing proposal, literature searching and writing a research report. At the end of semester, students are expected to have their own research product and required to present their findings as well.

KI51303 Advanced Database Management

The overall aim of this course is to introduce various ways of designing and implementing database systems, features and distributed databases. Students will develop knowledge and understanding of the underlying principles of Relational Database Management System. Student

will also build capacity to learn Database Management System advanced features. This course will also develop student's competence in enhancing database models using distributed databases and build capacity to implement and maintain an efficient database system using various emerging technologies and tools.

KI51403 Software Testing

Professional testing of software has become an increasingly important task that requires a profound knowledge of testing techniques. This course covers the "Foundations Level" (i.e., entry level) and teaches the most important methods of software testing. Additionally, in this course, technical terms have been stated more precisely according to the revised and uptated International Software Testing Qualifications Board (ISTQB) glossary.

KI51503 Advanced Computer and Communication Networks

This course is designed to teach students the key principles of computer networks with examples drawn from the real world of network and protocol design. Using the Internet as the primary example, this course covers various protocols and networking technologies. The systems-oriented approach which is discussed in this course encourages students to think about how individual network components fit into a larger, complex system of interactions.

KI51603 Web Engineering

Students begin this course by understanding how the internet functions in tandem with the various latest World Wide Web technologies. This course then embarks on its main objective of exposing students to the numerous and diverse collection of current web site design and application development technologies. Students will learn the basic principles, protocols & current practices that power the internet and World Wide Web, how to design and implement a basic web application, how to program scripts that serve the client's browser, how to program scripts that access information from the web server and how to integrate databases into the design of dynamic, data-driven e-commerce web applications.

KI51703 Software Engineering In Large Scale System

This course is designed to present students with an overview of advanced topics in Software Engineering. Students will be exposed to techniques that are gaining increasing attention in the industrial and research communities. Students will apply the software engineering techniques to homework assignments and mini-projects throughout the course. Both individual and group-

oriented exercises will be assigned. Class participation is an essential component of the course. Students will have opportunities to develop and/or improve their technical writing and software development skills during the course of the term.

KI71103 Mobile Application Development

This course is designed show students how to create consumable web services for mobile devices, walk students through the design and development of mobile user interfaces, uncover what students need to get started coding mobile websites, give students the tools to start developing.

KI71203 Mobile Cloud Computing

The course is to teach one of the newest and fastest developing fields in the discipline, mobile and wireless computing. The course is an introduction to mobile and wireless computing. It discusses the basic principles and technologies in mobile and wireless computing. The course assumes a general knowledge of computer communications, and the assignments will need programming skills.

KI71303 Software Requirement Analysis Engineering

The course is to teach one of the newest and fastest developing fields in the discipline, mobile and wireless computing. The course is an introduction to mobile and wireless computing. It discusses the basic principles and technologies in mobile and wireless computing.

KI71403 Software Security

This course covers topics such as model checking, symbolic execution, taint analysis, proof-carrying code, and other topics. For each topic covered, students should be able to answer "Why is this secure?". In particular: a) Describe how the method works b) Describe the sorts of attacks the method catches, c) Weakness and possible attacks not caught or outside the scope of the method.

KI71503 User Interface Design

This course provides an introduction and overview of the field of human computer interaction (HCI). HCI is an interdisciplinary field that integrates theories and methodologies from computer science, cognitive psychology, design, and many other areas.

KI71603 Advanced Topics In Software Development

This is an individualized course designed to allow students to pursue a selected topic not taught as a part of the regular course offerings under the supervision of a Computer Science faculty member. In addition, courses dealing with topics of special interest and/or new emerging areas of software .

KI61112 Computer Science Project

The course is designed to provide students the opportunity to put into practice the knowledge and skills that they have acquired throughout the Computer Science graduate programme. In this course, students develop their ability to analyze problem, conduct a literature review, design and propose solution to solve the mentioned problem. Students also sharpen their communication skills by meeting project supervisors, presenting projects and writinf reports for their Computer Science project. In addition to that, students also gain experience in managing a substantial project in Computer Science.

4.3.2 Master of Computer Science (Computational Intelligence)

The programme aims to provide graduates with the advanced knowledge and opportunity to pursue, in depth, the solution of Computer Science with specialization in Computational Intelligence.

4.3.2.1 Study Duration

	Full-time	Part-time
No. of Weeks	17	17
No. of Semesters	3	4
No. of Years	1.5	2

4.3.2.2 Programme Educational Objectives

The main objective of the programme is to produce more skilled human resources in Computer Science with specialization in Computational Intelligence such as Artificial Intelligence and Robotics, Information Retrieval and Machine Learning, in order to support the adoption of IR 4.0 at national and international level. The programme is designed to:

- Computer Science specialists with advanced knowledge, applying enhanced technical and numeracy skills in the field of computational intelligence to provide innovative solutions in computing.

- Computer Science specialists with leadership skills and good interpersonal and communication skills to interact with stakeholders effectively.
- Computer Science specialists who engage and advocate lifelong learning activities and have an entrepreneurial mindset.
- Computer Science specialists who uphold and defend ethical conduct, professional practices and issues in maintaining integrity.

4.3.2.3 Programme Learning Outcomes

At the end of the programme, the graduates should be able to:

- Integrate advanced knowledge with specialization in computational intelligence .
- Recommend innovative solutions that are at the forefront of developments in computational intelligence.
- Construct computational intelligence solutions and tools in terms of their usability, efficiency and effectiveness.
- Demonstrate effective interaction within a group and with a diverse audience through project discussions and participation in discourses related to computational intelligence.
- Exhibit effective communication within a group and with a diverse audience by publishing and presenting technical materials in computational intelligence.
- Utilise digital skills to acquire, interpret and extend knowledge in computational intelligence.
- Apply numerical skills to acquire, interpret and extend knowledge in computational intelligence.
- Demonstrate leadership, teamwork, autonomy and responsibility in delivering services related to computational intelligence.
- Exhibit capabilities to extend relevant knowledge through life-long learning in computational intelligence.
- Exhibit capabilities of having an entrepreneurial mindset to the related to computational intelligence.
- Uphold professional and ethical practices in conducting research and delivering services related to computational intelligence.

4.3.2.4 Course Offered

KI50103 Algorithm and Analysis

This course covers major algorithms and data structures for searching and sorting, graphs, and analysis in optimization techniques. It also covers the concepts of algorithm complexity to solve various problems in different domains.

KI50203 Research Methods in Computer Science

This course will introduce the research environment in Computer Science to the students. The main stages of conducting research are covered that include choosing a research topic, writing proposal, literature searching and writing a research report. At the end of semester, students are expected to have their own research product and required to present their findings as well.

KI50303 Advanced Database Management

The overall aim of this course is to introduce various ways of designing and implementing database systems, features and distributed databases. Students will develop knowledge and understanding of the underlying principles of Relational Database Management System. Student will also build capacity to learn Database Management System advanced features. This course will also develop student's competence in enhancing database models using distributed databases and build capacity to implement and maintain an efficient database system using various emerging technologies and tools.

KI50403 Evolutionary Computing

The aim of the course is to expose students to the different methodologies of biologically-inspired algorithms and computation. This course will provide students with a basic understanding of evolutionary computation. Topics include an overview of how biology inspired computational algorithms, the basic processes of an evolutionary algorithm, genetic algorithms, evolution strategies, evolutionary programming, genetic programming and how to practically apply evolutionary computation.

KI50503 Advanced Computer and Communication Networks

This course is designed to teach students the key principles of computer networks with examples drawn from the real world of network and protocol design. Using the Internet as the primary example, this course covers various protocols and networking technologies. The systems-

oriented approach which is discussed in this course encourages students to think about how individual network components fit into a larger, complex system of interactions.

KI50603 Advanced Data Mining

This course will be an introduction to data mining. Topics will range from statistics to machine learning to database, with a focus on analysis of large data sets. This course introduces the process and main techniques in data mining, including association rule learning; classification approaches such as inductive inference of decision trees and neural network learning, clustering techniques, and association rules.

KI50703 Artificial Intelligence Techniques

This course discusses the advanced methods and key technology from theory, algorithm, system and applications related to artificial intelligence. Topics included are Logic Foundation of Artificial Intelligence, Constraint Reasoning, Qualitative Reasoning, Case_based Reasoning, Probabilistic Reasoning, Inductive Learning, Support Vector Machine, Explaination-Based Learning, Reinforce Learning, Rough Set, Association Rules, Evolutionary Computation, Distributed intelligence and Artificial Life.

KI70103 Artificial Intelligence and Robotics

This course provides an overview of autonomous robots, unmanned ariel vehicle, and methodologies used in designing robot controllers. The subject covers problem solving for basic mobile robot movement, path planning and path navigation using different learning methods, without direct human interaction in controlling the robot movement. A clear introduction on autonomous robots and robot simulator are first presented in the early of this course. It follows with the discussions of common learning methods used in designing robot controllers. Simple feed-forward neural network, conventional back-propagation, genetic algorithms, evolutionary programming, etc are further discussed in detail in the study. Then, several techniques used in designing new fitness function for robot behavior are discussed. The course finishes with hand-on project for programming robot movement in several different challenging environments.

KI70203 Data Analysis and Visualization

This course is designed to cover two main sections: pattern discovery and graphical Exploratory Data Analysis (EDA). This course first cover linear and nonlinear dimensionality reduction because sometimes structure is discovered or can only be discovered with fewer dimensions or

features. The second section of the course discusses many of the standard techniques of visualization for EDA.

KI70303 Information Retrieval

This course will cover traditional material as well as recent advances in information retrieval (IR), the study of the indexing, processing, and querying of textual data. The focus will be on newer techniques that try to move beyond keyword search and bring some “intelligence” to the task of processing and retrieving textual information, including hypertext documents available on the world-wide-web.

KI70403 Machine Learning

Machine Learning brings together all the state-of-the-art methods for making sense of data. With hundreds of worked examples and explanatory figures, this course provides the explaination on principles behind these methods in an intuitive yet precise manner and will appeal to novice and experienced readers alike.

KI70503 Multi- Agents System

This course will introduce the student to the main theory and the applications of agent technology in e-commerce. The course describes the discipline, the nature of agents and how such systems can be built, as well as multi-agent systems and in particular interaction among agents. The course also details how agent technology can assist user by providing recommendations and searching for finding goods and services on the Internet.

KI70603 Advanced Topics In Computational Intelligence

This is an individualized course designed to allow students to pursue a selected topic not taught as a part of the regular course offerings under the supervision of a Computer Science faculty member. In addition, courses dealing with topics of special interest and/or new emerging areas of computational intelligence will be offered with this number. Selected topics courses will be structured very much like a regular course with homework, project and exams. Credit according to work completed.

KI60112 Computer Science Project

The course is designed to provide students the opportunity to put into practice the knowledge and skills that they have acquired throughout the Computer Science graduate programme. I
n this

course, students develop their ability to analyze problem, conduct a literature review, design and propose solution to solve the mentioned problem. Students also sharpen their communication skills by meeting project supervisors, presenting projects and writinf reports for their Computer Science project. In addition to that, students also gain experience in managing a substantial project in Computer Science.

4.4 Doctoral Programme by Research

Doctor of Philosophy in Computer Science

This programme aims to produce Computer Science experts

1. who are competent with a firm grounding in Computer Science fields to foster research and development of new knowledge in the field of study,
2. who lead in their expertise and can communicate convincingly and interact effectively with diverse stakeholders,
3. with positive attitudes, actively engaging in lifelong learning activities, and entrepreneurial mindset for a successful career, and
4. who uphold and defend ethical and professional practices in advancing the profession while maintaining self and professional integrity.

Doctor of Philosophy in Information Technology

This programme aims to produce Information Technology experts

1. who are competent with a firm grounding in Information Technology fields to foster research and development of new knowledge in the field of study,
2. who lead in their expertise and can communicate convincingly and interact effectively with diverse stakeholders,
3. with positive attitudes, actively engaging in lifelong learning activities, and entrepreneurial mindset for a successful career, and
4. who uphold and defend ethical and professional practices in advancing the profession while maintaining self and professional integrity.

4.4.1 Admission Requirements

i. A Master's degree (Level 7, MQF) in the field of Computing or related fields as accepted by the university Senate; OR

ii. A Master's degree (Level 7, MQF) in Non-Computing fields with a minimum of FIVE (5) years of working experience in the field of computing or related fields must undergo appropriate prerequisite courses as determined by the faculty; OR

iii. A Master's degree (Level 7, MQF) in Non-Computing fields with less than FIVE (5) years of working experience in the field of computing or related fields must undergo appropriate prerequisite courses as determined by the faculty and subject to rigorous assessment by the faculty; OR

iv. Candidates who are registered as Master candidates at the Universiti Malaysia Sabah and have obtained approval to upgrade by the university postgraduate committee and approved by the university Senate; OR

v. Other qualifications equivalent to a Master's degree in the field of Computing or related fields recognised by the Government of Malaysia must undergo appropriate prerequisite courses as determined by the university.

4.4.2 English Proficiency Requirements (International Candidate Only)

(a) International applicants or non-English speaking countries applicants must achieve a minimum of Band 4 in MUET or equivalent to CEFR (Mid B2) such as Band 6.0 in IELTS, score of 60 in TOEFL iBT and score of 59 in PTE; OR

(b) Fulfil the general language requirement outlined by the university.

4.2.3 Graduate on Time Schedule

Semester	Activities	Milestones	Assessments
1	• Attend Research Methodology Course • Write research proposal • Learn to use reference manager software (Mendeley) and document preparation system (LaTeX)	• Pass Research Methodology Course • Pass Proposal Defence • Pass Progress Report	• Research Methodology Course • Proposal Defence • Progress Report
2	• Write thesis chapter 1 (Introduction) • Attend Research Literacy Course	• Pass Progress Report	• Progress Presentation • Progress Report

3	• Write thesis chapter 2 (Literature Review) • Attend Research Literacy Course • Write review/survey paper	• Submit review/survey paper to a Scopus/WoS indexed journal • Pass Progress Report	• Progress Presentation • Progress Report
4	• Write thesis chapter 3 (Methodology) • Attend Research Literacy Course	• Pass Progress Report	• Progress Presentation • Progress Report
5	• Conduct experiment or field work • Write thesis chapter 4 (Results and Findings) • Attend Research Literacy Course • Write journal article	• Present research work at a conference • Submit article to a Scopus/WoS indexed journal • Pass Progress Report	• Progress Presentation • Progress Report
6	• Write thesis chapter 5 (Conclusion) • Write journal article (optional) • Prepare a complete thesis	• Submit article to a Scopus/WoS indexed journal (optional) • Submit Thesis	• Pre-Viva • Viva Voce • Thesis

5. CONFERMENT OF DEGREE

5.1 Master Programme by Research

- Produce at least one (1) article published / accepted in Scopus / WoS indexed journals before submitting the final dissertation.
- Present research work at least once at any conference and publish in Scopus indexed proceedings.

5.2 Doctoral Programme by Research

- Produce at least two (2) articles published / accepted in Scopus / WoS indexed journals before submitting the final thesis.
- Present research work at least once at any conference and publish in Scopus indexed proceedings.

6. FEE STRUCTURE

6.1 Master Programme by Research

		Master
Non-Recurring Fees	Registration Fee	2,930.40
Recurring Fees	Semester Fee	4,380.00
Non-Recurring Fees	Viva Fee	1,000.00
If Applicable	Re-Viva Fee	1,000.00

6.2 Master Programme by Mixed Mode (MIS)

	Full-time (RM)
Local Applicants	17, 495.00
International Applicants	36, 315.00

6.3 Master Programme by Coursework (MCSCI / MCSSD)

	Full-time (RM)	Part-time (RM)
Local Applicants	19, 355.00	21, 430.00
International Applicants	39, 980.00	39, 980.00

6.4 Doctoral Programme by Research

		PhD
Non-Recurring Fees	Registration Fee	2,930.40
Recurring Fees	Semester Fee	4,620.00
Non-Recurring Fees	Viva Fee	1,500.00
If Applicable	Re-Viva Fee	1,000.00

Note: Please note that the fees may change from time to time. We reserve the right to adjust pricing without prior notice.

7. APPLICATION PROCEDURE

Applicant	**Malaysian (Computing background)**	**Malaysian (Non-Computing background)**	**International (Computing background)**	**International (Non-Computing background)**
Submit Application	https://mohon.ums.edu.my/pasca/			
Call for Interview	No	Yes	Yes	Yes
After 1 month,				
Application Result (if success)	Full Offer	Conditional Offer (Join Pre-Requisite for 7 Weeks)	Full Offer **OR** Conditional Offer (Provide English Proficiency Proof* within 1 year)	Full Offer **OR** Conditional Offer (Join Pre-Requisite) **OR** Condition Offer (Join Pre-Requisite for 7 Weeks and Provide English Proficiency Proof* within 1 year)
After accepting the offer,				
Tasks before the registration day	Complete the e-registration via the link provided by the Centre of Postgraduate Studies at UMS.	Students who received Conditional Offer MUST satisfy the required conditions before completing the e-registration via the link provided by the Centre of Postgraduate Studies at UMS.		

Tasks during the registration day	Come to the Centre of Postgraduate Studies at UMS physically to submit all necessary documents and complete the registration.
Tasks after the registration day	Contact the Postgraduate Section at FCI for more information.

*Notes: English Proficiency Proof includes Progressive English Programme certificate by UMS, IELTS, TOEFL iBT or PTE result slip.

8. CONTACT INFORMATION

Faculty Office

Address: Faculty of Computing and Informatics, Universiti Malaysia Sabah, Jalan UMS, 88400 Kota Kinabalu, Sabah, Malaysia

Phone: +6087-503131 - Labuan Campus, +6088-329720 - KK Campus

Email: pejfki@ums.edu.my

Key Personnel

Program Coordinator (Research):

Dr. Jackel Chew Vui Lung

Email: jackelchew93@ums.edu.my

Program Coordinator (Coursework / Mix-mode):

Dr. Zaidatol Haslinda Abdullah Sani

Email: lindas.sani@ums.edu.my

Communication Channels

Faculty Website: https://fki.ums.edu.my/

Facebook: https://www.facebook.com/fki.ums

Instagram: https://www.instagram.com/fki.ums/

Linkedin: https://www.linkedin.com/in/fki-fci/

YouTube Channel: https://www.youtube.com/@fkiums7391

This handbook is designed to provide you with all the necessary information for a successful academic journey at the Faculty of Computing and Informatics, Universiti Malaysia Sabah. We wish you all the best in your studies and future endeavours.

SECTION RESEARCH & INNOVATION

TS. DR. NORAZLINA BINTI KHAMIS
Deputy Dean (Research & Innovation)

Tel : 088-320000 ext. 103606
e-mail : norazlina@ums.edu.my

DIANA BINTI KIMMUAN
Senior Science Officer (C29)

Tel : 088-320000 ext. 101043
e-mail : diane@ums.edu.my

LEOPOLD MODIES FALIX
Senior Administrative Assistant (N22)

Tel : 088-320000 ext. 101859
e-mail : leomf@ums.edu.my

REFERENCES

GENERAL GUIDELINES	https://www.ums.edu.my/ppp/index.php/grants-funds/documents-and-forms/general-guidelines-form
MANAGEMENT OF RESEARCH UNIT	https://www.ums.edu.my/ppp/index.php/grants-funds/documents-and-forms/management-of-research-unit
MyRA	https://www.ums.edu.my/ppp/index.php/grants-funds/documents-and-forms/general-guidelines-form
POSTDOCTORAL	https://www.ums.edu.my/ppp/index.php/grants-funds/documents-and-forms/general-guidelines-form
RESEARCH FELLOW	https://www.ums.edu.my/ppp/index.php/grants-funds/documents-and-forms/general-guidelines-form
CONFERENCE MANAGEMENT	https://www.ums.edu.my/ppp/index.php/grants-funds/documents-and-forms/general-guidelines-form
UMS ANIMAL ETHIC	https://www.ums.edu.my/ppp/index.php/grants-funds/documents-and-forms/general-guidelines-form
RESEARCH & INNOVATION	https://www.ums.edu.my/ppp/index.php/grants-funds/documents-and-forms/general-guidelines-form

RESEARCH CENTER / GROUP

ADVANCED MACHINE INTTELIGENCE RESEARCH CENTER (AMI RC)

ABOUT US

We are a diverse group of innovators who believe it is possible to adapt the most recent advanced technologies of the Fourth Industrial Revolution to provide smart solutions to the industry and society

WHO WE ARE

PROF TS DR RAYNER ALFRED

Head of RC

Ubiquitous Big Data Analytics, Smart Agriculture and Aquaculture

PROF DR JASON TEO TZE WI

Emotion Recognition, Evolutionary Computing, Artificial Life, Bio-Inspired Robotics

DR JAMES MOUNTSTEPHENS

Psychologically-Inspired Computing, Natural Language Processing

DR HJH FARASHAZILLAH BINTI YAHYA

Security Science, Schema Evolution

DR FLORENCE SIA FUI SZE

Contrast Subspace Mining, Data Mining

TS DR RAYNER @ HENRY PAILUS

Artificial Intelligence, Computer Vision, Data Science

RESEARCH CENTER / GROUP

ADVANCED MACHINE INTTELIGENCE RESEARCH CENTER (AMI RC)

WHO WE ARE

TS DR KHALIFA CHEKIMA

Artificial Intelligence, Natural Language Processing, IoT

RESEARCH NICHE

- Big Data Analytics
- Machine Learning
- Cloud Computing
- Internet of Things
- Cyber Security
- Intelligent Robotics
- Augmented Reality

RESEARCH SITE

Creative Advanced Machine Learning

RESEARCH CENTER / GROUP

OPTIMIZATION & VISUAL ANALYTICS RESEARCH GROUP (OVA)

ABOUT US

Our main objective is to serve as a medium between researchers and the public, broadcasting information related to laboratory activities and achievements..

Today, data is produced at an incredible rate and the ability to collect and store the data is increasing at a faster rate than the ability to analyze it. Over the last decades, a large number of automatic data analysis methods have been developed. However, the complex nature of many problems makes it indispensable to include human intelligence at an early stage in the data analysis process. Visual analytics methods allow decision makers to combine their human flexibility, creativity, and background knowledge with the enormous storage and processing capacities of today's computers to gain insight into complex problems. Using advanced visual interfaces, humans may directly interact with the data analysis capabilities of today's computer, allowing them to make well-informed decisions in complex situations.

WHO WE ARE

DR JACKEL CHEW VUI LUNG

Head of RG

Numerical Analysis

ASSOC. PROF DR. NG GIAP WENG

Augmented Reality

ASSOC. PROF DR. MUZAFFAR HAMZAH

Visualization

ASSOC. PROF DR. GOH SAY LENG

Optimization

DR MOHAMMAD FADHLI ASLI

Visualization & Visual Analytics

PROF DR ABDULLAH GANI

Advisor

Mobile Cloud Computing

RESEARCH CENTER / GROUP

OPTIMIZATION & VISUAL ANALYTICS RESEARCH GROUP (OVA)

RESEARCH THEME

1. Optimization & Operations
   - Timetabling
   - Scheduling
   - Meta-Heuristics
   - Hyper-Heuristics

2. Applied Visualization
   - Information Visualization
   - Visual Analytics
   - Data Storytelling
   - Narrative Visualization

3. Formal Methods
   - Numerical Analysis
   - Applied Statistics
   - Formal Verification

RESEARCH SITE

https://ovaresearch.wixsite.com/ova-research-group

RESEARCH CENTER / GROUP

DATA TECHNOLOGIES AND APPLICATIONS RESEARCH GROUP (DATA)

ABOUT US

Recent technology produces massive volumes of data. These datasets are complex, unstructured, heterogeneous that requires innovative approaches to handle them. At the Data Technologies and Applications, DaTA@UMS, we take this deluge of data and make sense of it. We employ various state-of-the-art techniques that encompasses machine learning, deep learning, artificial intelligence, Internet of Things and many more to turn these data into knowledge and insights to empower the society to better decision making. With respect to an application point of view, we focus on various problems, particularly those that are significant to the Sabah State such as healthcare, agriculture, security and environment. DaTA@UMS strive to not only conduct research on these areas but to produce innovations and solutions to benefit the society.

WHO WE ARE

ASSOC. PROF TS DR MOHD HANAFI BIN AHMAD HIJAZI

Head of RG

Data Mining, Artificial Intelligence, Machine Learning

ASSOC. PROF TS DR CHIN KIM ON

Artificial Neural Networks, Image Processing, Sentiment Analysis, Evolutionary Computing

DR ERVIN GUBIN MOUNG

Object Detection, Deep Learning/Machine Learning, Reinforce Learning, Image Processing

TS DR CHIN PEI YEE

Emerging and Collaborative Technologies, The Future of Work, The Philosophy of Technology

RESEARCH CENTER / GROUP

DATA TECHNOLOGIES AND APPLICATIONS RESEARCH GROUP (DATA)

RESEARCH NICHE

1. To conduct research on big data analytics tailored to the needs of the communities and nation.
2. To produce high impact output on data analytics related research work.
3. To translate research findings to applications or knowledge transfer that benefit the communities.

RESEARCH SITE

https://umsdata.wordpress.com

RESEARCH CENTRE / GROUP

CREATIVE COMPUTING RESEARCH GROUP (CCRG)

ABOUT US

Creative computing is an interdisciplinary field of computer science that emphasizes the computational aspects of creativity. It is concerned with the study of the design, implementation, and evaluation of systems that support creative processes. Creative computing research has been conducted in a variety of areas, including artificial intelligence, cognitive science, human-computer interaction, and computational art.
We are a Research Group at Universiti Malaysia Sabah that conduct research on creative computing in general. Creative Computing ReSearch Group (CCRG) is a collection of experts in multiple fields related to Creative Computing based in Sabah, Malaysia region. The fields encompass digital entertainment, games, animation, multimedia, gamification and many others that fall under the umbrella of Creative Computing.

WHO WE ARE

DR WAN NOORAISHYA WAN AHMAD

Head of RG

Persuasive Technology Emotion in HCI, User Experience (UX)

DR SUAINI SURA

Intelligence Commerce, Social Commerce

DR NOORALISA MOHD TUAH

HCI, Usability, Serious Games, Gamification

RYAN MACDONELL ANDRIAS

Multimedia, Gamification, VR/AR

AHMAD RIZAL AHMAD RODZUAN

Gamification, Game-based Learning, Creative Digital Content

AINNECIA YOAG

HCI, User Experience (UX)

RESEARCH CENTRE / GROUP

CREATIVE COMPUTING RESEARCH GROUP (CCRG)

WHO WE ARE

DG SENANDONG AJOR

Data Mining, Predictive Modelling Techniques, Digital Tourism

NURAINI JAMIL

Specialization Electroencephalogram (EEG), Cognitive abilities, online learning

RESEARCH NICHE

- Persuasive Technology
- Serious Games
- Games Development and Gamification
- Social Commerce Systems
- Social Network Research
- Virtual/Augmented Reality

RESEARCH SITE

https://sites.google.com/ums.edu.my/fci-ccrg/home

RESEARCH CENTER / GROUP

DECISION SUPPORT SYSTEMS RESEARCH GROUP (DSSRG)

ABOUT US

Decision Support Systems (DSS) Research Group at UMS pulls together multi-talented and globally trained scholars in many related areas of DSS. These include strategic DSS, analysis and design, optimisation, fintech, system implementation, business process re-engineering and clinical DSS. The group focuses on both the pure and applied areas of DSS studies, particularly in the healthcare domains. As a result of their dedication, the group has earned the trust of the central and district hospitals throughout the State of Sabah in designing, developing, and implementing clinical DSS for their breast cancer patients.

WHO WE ARE

ASSOC. PROF DR SYED NASIRIN SYED ZAINOL ABIDIN

Head of RG

DSS Implementation,
DSS Strategic, Open Innovation

DR ESMADI ABU BIN ABU SEMAN

Strategic DSS & Networking

DR TAMRIN AMBOALA

DSS Process Re-Engineering,
DSS Business Information Systems

SOFFRI YUSSOF

DSS Strategic Open Innovation

TS HADZARIAH ISMAIL

DSS Analysis & Design

IZA AZURA AHMAD BAHAR

DSS Task Scheduling
DSS Optimization
DSS Health Informatics

RESEARCH CENTER / GROUP

DECISION SUPPORT SYSTEMS RESEARCH GROUP (DSSRG)

WHO WE ARE

NONA MASNIE MOHD NISTAH

DSS & Fintech

RESEARCH NICHE

- DSS Foundations, e.g. principles, concepts, and theories of enhanced decision making; formal languages and research methods enabling improvements in decision making. Theory validation must be carefully addressed.
- DSS Functionality, e.g. methods, tools, and techniques for developing the functional aspects of enhanced decision making; solver, model, and data management in DSSs; rule formulation and management in DSSs; DSS development and use in computer-supported cooperative work, negotiation, research, and product.
- DSS Interfaces, e.g. methods, tools, and techniques for designing and developing DSS interfaces; development, management, and presentation of knowledge in a DSS; coordination of a DSS's interface with its functionality.
- DSS Implementation - DSS implementation experiences and utilization; DSS management and updating; DSS instruction/training. A critical consideration must be how specific experiences provide more general implications.
- DSS Evaluation and Impact, e.g. evaluation metrics and processes; DSS impact decision-makers, organizational processes, and performance.

RESEARCH SITE

https://sites.google.com/view/dss-rg/home

RESEARCH CENTER / GROUP

USER EXPERIENCE RESEARCH GROUP (UX)

ABOUT US

"Redesign the experience by researching the user."
"Creativity has no limits, Just have fun"

WHO WE ARE

DR. NUR FARAHA HJ MOHD NAIM

Head of RG

Digital Media Production, Multimedia, User Experience

PROF DR AG ASRI AG IBRAHIM

Sonification/ Human-Computer Interaction/ Kansei engineering/ Usability

DR CAROLYN SALIMUN

Human-Computer Interaction, Interface Design, User Experience

DR DINNA @ NINA MOHD NIZAM

Digital Educational Games, Gamification, User Experience, Eye-tracking, Interaction Design, Augmented and Virtual Reality, and Human-Computer Interaction.

DR ZAIDATOL HASLINDA ABDULLAH SANI

Human-Computer Interaction / User Experience (UX) / Usability

RESEARCH CENTER / GROUP

USER EXPERIENCE RESEARCH GROUP (UX)

WHO WE ARE

SITI HASNAH TANALOL

Computer Science / E-Learning/ Computer Graphics

ASSOC. PROF TS DR ASLINA BAHARUM

Collaborator
Universiti Teknologi MARA (UiTM)

RESEARCH NICHE

1. User Experience
2. Human-Computer Interaction
3. Usability

RESEARCH SITE

https://sites.google.com/ums.edu.my/uxrg/home

RESEARCH CENTER / GROUP

CYBERSECURITY RESEARCH GROUP (CYBERSECURITY)

ABOUT US

To bring together expertise in network and data security fields to conduct remarkable research which are not only observe and analyse the phenomena in these fields, but also foresee the future security-related problems in the network and also the data itself.

WHO WE ARE

DR SALMAH FATTAH
Head of RG

Underwater Wireless Sensor Networks (UWSN), Wireless Sensor Networks (WSN), Multi-objective Optimization, Intelligent Robotics, Internet of Things (IoT)

TS DR TAN SOO FUN

Post-quantum Cryptography, Data and Information Security, Network Security, Socio-Technical Security

ASSOC. PROF TS DR LEAU YU BENG

Network Security, Internet Security, Socio-Technical Security

DR. GOHAR RAHMAN

Cryptography, DNA Cryptography, Mutual Authentication, Key Exchange Protocols

NORDALIELA BINTI MOHD RUSLI

Network Security, Internet Security, Socio-Technical Security

AINNUR HAFIZAH BINTI ANUAR MOKHTAR

Cybersecurity, Data Security, Information Security

RESEARCH CENTER / GROUP

CYBERSECURITY RESEARCH GROUP (CYBERSECURITY)

RESEARCH NICHE

Internet and Communication Security

- Network Traffic Anomaly Prediction, Distributed Denial of Service (DDoS) Attack Prevention and Detection, Phishing attack Detection

Data and Information Security

- Post-Quantum Cryptography, Lattice-based Cryptography, Homomorphic Encryption Scheme, Attribute-based Encryption Scheme, Honey Encryption Scheme, Elliptic Curve Digital Signature Algorithm (ECDSA), Lighweight ElGamal Scheme

Socio-technical Security

- Malaysian Security Awareness of Banking Authentication

RESEARCH SITE

http://cybersecurity.umshaina.com/index.html

RESEARCH CENTER / GROUP

LANGUANGE ENGINEERING & APPLICATION RESEARCH GROUP (LEAD)

ABOUT US

We conduct interdisciplinary research, development and innovation by combining computing, language, science, education, psychology, social network analysis, intelligent software engineering and smart systems development. We aim to produce flexible digital opportunity development. We are particularly interested in the analytics and development of related applications that support language and human communication in education, summarization, sentiment analytics, and intelligent software engineering and its application.

WHO WE ARE

DR. SAMRY @ MOHD SHAMRIE SAININ

Head of RG

Machine Learning, Pattern Recognition, Image & Speech Recognition

TS. DR. NORAZLINA BINTI KHAMIS

Intelligent Software Engineering, Software Testing, Smart Transportation

DR. SURAYA BINTI ALIAS

Software Engineering, Pattern Recognition, Text Summarization

DR. LAI PO HUNG

Artificial Intelligence, Pattern Recognition, Sentiment Analysis

ASSOC. PROF. DR. AZALI BIN SAUDI

Robotics, IoT

TS. NORDIN SAAD

IoT, Cloud Computing

RESEARCH CENTER / GROUP

LANGUANGE ENGINEERING & APPLICATION RESEARCH GROUP (LEAD)

WHO WE ARE

ASNI TAHIR

Application Development, Wireless Tracking

SHALIZA HAYATI A. WAHAB

Unmanned Aerial Vehicles, Path Planning

NORHAYATI DAUT

Application Development

RESEARCH NICHE

1. Software Technology and Application Development
2. Sentiment Analytics and Summarization
3. IoT & Robotics

RESEARCH SITE

https://sites.google.com/ums.edu.my/lead/home

FCI DEAN


PROFESOR DR.
ROZAINI BIN ROSLAN
DEKAN SSIL
2005 - 2007


PROFESOR DR.
AG. ASRI BIN AG. IBRAHIM
PEMANGKU DEKAN SSIL
2000 - 2004


PROFESOR MADYA DR.
PATRICIA ANTHONY
DEKAN SSIL
2007


PROFESOR MADYA DR.
MUZAFFAR HAMZAH
PEMANGKU DEKAN SSIL
2007 - 2008


PROFESOR DR.
AG. ASRI BIN AG. IBRAHIM
DEKAN SSIL 2009 - 2014
DEKAN FKI 2014 - 2019


PROFESOR DR.
ABDULLAH BIN GANI
DEKAN FKI
2019 - 2021


PROFESOR MADYA TS. DR.
MOHD HANAFI BIN AHMAD HIJAZI
DEKAN FKI
2021 - SEKARANG

PERSATUAN MAHASISWA FKI-KAL

MAJLIS TERTINGGI

FATIN NABILA BINTI ALADIN
Presiden

Oliver Leonard Chua Linggau
Timbalan Presiden 1

Mohammad Ilman Bin Musri
Timbalan Presiden 2

Uma Khirthana A/P Omarpathy
Setiausaha

Cynthia Anak Jason
Timbalan Setiausaha

Chan Feng En
Bendahari

Muhammad Danish Iman Bin Mohd Salmizam
Timbalan Bendahari

PERSATUAN MAHASISWA FKI-KAL

MAJLIS EKSEKUTIF

Ahmad Rusyaidi Bin Abdul Razak

Ketua Exco Akademik

Mohd Nadzmie Anhas Bin Salamat

Exco Akademik

Low Bing Xuan

Ketua
Exco Media dan Publisiti

Mohammad Irfanlee Shawqi Bin John

Exco Media dan Publisiti

Awangku Mohammad Ariff bin Mohd Azri

Exco Media dan Publisiti

Shanmuga Priya A/P Anbualagan

Ketua Exco Kebajikan

Ain Nur Anisa Binti Che Aziz

Exco Kebajikan

Iffah Aqilah

Ketua Exco Keusahawanan

Prince Alexzander Antoh

Exco Keusahawanan

Adham Bin Zainuddin

Ketua Exco Kerohanian & Pembangunan Insan

Brendle Oniel Oliver Alfred

Exco Kerohanian & Pembangunan Insan

Mohammad Rizal Bin Beni

Ketua Exco Hubungan Luar

Muhammad Azib Bin Lidin

Exco Hubungan Luar

Glorie Octavi Gregory

Exco Hubungan Luar

PERSATUAN MAHASISWA FKI-KAL

MAJLIS EKSEKUTIF

Hadie Amiezul Bin Abdullah

Ketua Exco Kebudayaan & Inovasi

Sean Chow Wen Xin

Exco Kebudayaan & Inovasi

Ambron Recildo De Zevar Sebin

Ketua Exco Sukan & Rekreasi

Arrica Juari

Exco Sukan & Rekreasi

Awang Aiziel Azeem Bin Ag Salleh

Exco Sukan & Rekreasi

ALUMNI FKI

Ts. Syahrul Hafidz Bin Suid

Head of Solutions
Theta Edge Berhad

Alumni 2004-2007

Voon Mei Luan

Senior Backend Developer
Kingdom Digital

Alumni 2018-2022

AP. Dr. Goh Say Leng

Associate Professor
Universiti Malaysia Sabah

Alumni 2001-2004

Abdul Hafiz Bin Gani

Software Developer
Maybank

Alumni 2018-2022

Nurdiana binti Jamal

System Analyst
Aman Manusia Sdn Bhd

Alumni 2015-2019

Eva Chowdhury

Lecturer
East Delta University

Alumni 2017-2021

Mekhi Marolyne Binti Uju

Application Engineer
Hitachi eBworx Sdn. Bhd

Alumni 2018-2022

Nicholas Lee Yi Min

Regional Data Analyst - Ads Measurement
Grab HQ

Alumni 2019-2023

Shelva Ganeish Ravindran

Software Design Engineer
Sensata Technologies

Alumni 2018-2022

AP Ts. Dr. Chin Kim On

Assoc. Prof. Ts. Dr. / e-Learning Coordinator
FKI UMS

Alumni 2000-2003

Chaw Kok Fei

Software Engineer 1
Dell Technologies

Alumni 2019-2023

Mohd Akmal Hafiz Bin Md Hatta

Resident Engineer - Data Center
Exenterix Network Sdn Bhd

Alumni 2019-2023

Nurul Husna Hanis Binti Kharullnizam

Specialist, IP Network, Cloud, NFV & Security Operation
U Mobile Sdn Bhd

Alumni 2019-2023

Nurul Ashiekin Che Roslan

Network Engineer
Tridimas Sdn. Bhd.

Alumni 2018-2022

ALUMNI FKI

Sarah Nafisa Rosli

Software QA Engineer
Skandinaviska Enskilda Banken AB (SEB)

Alumni 2016-2020

Abdul Qawi Bin Kamran

Software Engineer
FPT Software Malaysia

Alumni 2019-2023

Nurul Ain Binti Sharudin

QAQC Executive
Drpest Sdn Bhd

Alumni 2012-2016

Kathiravan A/L Kunasegaran

IT Support
CCI Pos Solutions

Alumni 2019-2023

Muhammad Hasif Bin Hassanuddin

Guru Akademik Biasa (GAB)
Kem. Pendidikan Malaysia

Alumni 2015-2019

Thurairaj A/L R. Ulaganathan

Data Engineer
Sime Darby Industrial

Alumni 2019-2023

Tseu Geanna Afera

IT Administrator
Deriv

Alumni 2018-2022

Nizam Bin Nordin

Executive Software Engineer / QA Testing Engineer
PETRONAS DIGITAL Sdn Bhd

Alumni 2018-2022

Jafar Darma

Videographer/ Video Editor
Yayasan Mawaddah

Alumni 2012-2016

Farah Hazwani binti Jaafar

Video Producer-Director
Jirnexu Sdn Bhd

Alumni 2012-2016

Solihah Binti Abdullah Sani

Peg. Perkhidmatan Pendidikan
Kem. Pelajaran Malaysia

Alumni 2012-2016

Justin Chan

Senior Marketing Executive
SkyAvenue, Resorts World Genting

Alumni 2017-2021

AP Ts Dr Tan Tse Guan

Director
Universiti Malaysia Kelantan

Alumni 2003-2006

Angus Ting Chee Leong

Merchant Service Executive
AEON Credit Services (M) Bhd

Alumni 2018-2022

ALUMNI FKI

Daimler Benz Alebaba

Software Engineer
Phi Software Sdn Bhd

Alumni 2017-2021

Lawrence Charles

Management Trainee
Katrina Holding Co. Pte Ltd

Alumni 2015-2019

Nur Fatin Najihah bt Kamaluddin

Audit Engineer
MIMOS BERHAD

Alumni 2017-2021

Vernord Musran

Software Engineer
Incoline Resources Sdn Bhd

Alumni 2019-2023

Stephenie Edwina Anak Bungkong

ICT Teacher
Ministry of Education

Alumni 2000-2004

Maizan Syamimi Meor Yahaya

Associate
Deloitte

Alumni 2019-2023

Lizzam Abdul Latiff

UI/UX Team Lead
Collabera Digital (M) Sdn. Bhd.

Alumni 2002-2005

Muhammad Hazim bin Mohd Isnan

Graphic Designer
Perdana Kota Bharu

Alumni 2017-2022

Siti Nursyazana Ibrahim

Postgraduate Student
Universiti Malaysia Sabah

Alumni 2017-2020

Ngoo Chong Man

PhD Student
Universiti Malaysia Sabah

Alumni 2017-2021

Ts. Zulkifly Amirudin

Animation Director
Inspidea Sdn Bhd

Alumni 2002-2005

Zainal Abidin Bin Yusoff

HR & Admin Manager
MASTEK OIL TOOLS Sdn Bhd

Alumni 2002-2005

Mary Ellen Damian

Guru
SK Panudahan Kudat

Alumni 2000-2003

Oneal Fernandez

English Teacher
Kem. Pendidikan Malaysia.

Alumni 2000-2004

ALUMNI FKI

Muhammed Amin Bin Hashim

Business Analyst
DHL eCommerce Malaysia

Alumni 2015-2019

Amanda Ann Anak Sebastian

Senior Broadcast Engineer
Sarawak Media Group Sdn Bhd

Alumni 2015-2019

Alexander Larry Aloysius

Head of Finance & Procurement
Ministry of Housing & Local Government

Alumni 2000-2004

Azmi Abas

Pen. Peg. Penguatkuasa
FINAS

Alumni 2007-2010