

**SARJANA MUDA KEJURUTERAAN PERISIAN DENGAN KEPUJIAN
(PEMBANGUNAN SISTEM MULTIMEDIA)
BACHELOR OF SOFTWARE ENGINEERING WITH HONOURS
(MULTIMEDIA SYSTEMS DEVELOPMENT)**

Pengenalan Program / *Introduction*

Kejuruteraan perisian menitikberatkan aspek pembangunan perisian, bermula daripada fasa perancangan sehingga penyelenggaraan dengan pendekatan bersistematik, berdisiplin, boleh diukur dan teratur. Program Ijazah Sarjana Muda Kejuruteraan Perisian (Pembangunan Sistem Multimedia) memberi fokus kepada pengeluaran perisian multimedia melalui analisis, reka bentuk, pembangunan dan pelaksanaan sistem berdasarkan prinsip kejuruteraan perisian. Program ini bertujuan untuk melahirkan jurutera perisian atau profesional pengkomputeran yang mahir dalam teori, alatan dan kaedah pembangunan perisian; cekap dalam menguruskan individu dan projek; dan pakar dalam Pembangunan Sistem Multimedia yang dinamik dan berskala besar tanpa had sempadan untuk menjadi kreatif dan inovatif, beretika dan dapat menyesuaikan diri dalam persekitaran kerja. Graduan boleh meneroka pelbagai jenis kerjaya seperti jurutera perisian multimedia, juruanalisis sistem multimedia, pembangun sistem multimedia, pembangun permainan dan penerbit media digital. Graduan yang layak boleh melanjutkan pelajaran ke peringkat pengajian lepasan ijazah yang mana mereka boleh meningkatkan pengetahuan dan kepakaran dalam Sistem Multimedia Termaju.

Software engineering concerns software development aspects, starting from planning to maintenance phase by adopting systematic, disciplined, quantifiable and an organised approach. The Bachelor of Software Engineering (Multimedia Systems Development) programme focus on multimedia software production through the analysis, design, development and implementation of the system based on the software engineering principles. The programme aims to produce software engineers or computing professional who are well versed in theories, tools and methods of software development; competent in managing people and project; and specialize in the dynamic and large scale of Multimedia System Development with unlimited boundary to be creative and innovative, ethical and able to adapt in working environment. Graduates can explore various types of career such as 50 as multimedia software engineer, multimedia system analyst, multimedia system developer, games developer and digital media producer. Qualified graduates can further their studies in the postgraduate level where they can enhance their knowledge and expertise in the advance of Multimedia System.

Syarat Kemasukan / *Entry Requirements*

Memenuhi Syarat Am Universiti;
Fulfil General Admission Requirements;

SERTA / *AND;*

DIPLOMA

1. Memiliki Diploma dalam bidang Komputeran dan setara yang berkaitan dari Institusi Pendidikan yang diiktiraf oleh Universiti dan Kerajaan Malaysia dan mendapat sekurang-kurangnya **PNGK 3.00**; *A Diploma in Computer Science and related equivalent from Educational Institution recognized by the University and the Government of Malaysia and obtain a minimum CGPA of 3.00;*

DAN / *AND;*

Mendapat sekurang-kurangnya **kredit** pada peringkat **SPM** dalam mata pelajaran:

- Mathematics

atau

Mendapat sekurang-kurangnya **lulus** pada peringkat **Diploma** dalam mata pelajaran:

- Mathematics

*Obtained at least a **Credit** at **SPM** level in the following subject:*

- *Mathematics*

Or

*Obtained at least a **Pass** at **Diploma** level in the following subject:*

- *Mathematics*

DAN / *AND;*

- (a) Calon dikehendaki mengemukakan transkrip akademik dari semester 1 hingga akhir
Candidates are required to submit academic transcripts of first to final semester

DAN / *AND;*

- (b) Mendapat sekurang-kurangnya Tahap 3 (Band 3) dalam Malaysian University English Test (MUET).
Obtain at least Level 3 (Band 3) in the Malaysian University English Test (MUET).

DAN / *AND;*

- (c) Lulus ujian dan/atau temu duga yang ditetapkan oleh fakulti
Pass in tests and/or interviews for admission as required by faculty

*Calon Lulusan Diploma dalam bidang Komputeran akan mendapat pengecualian kursus Tahun 1 dan ditawarkan terus ke Tahun 2 pengajian (tertakluk kepada kelulusan pihak fakulti).

**Candidates for the Diploma in Computer Science will receive a Year 1 course exemption and be offered straight to Year 2 of study (subject to faculty approval).*

ATAU / *OR;*

STPM / MATRIKULASI / ASASI

1. Mendapat sekurang-kurangnya PNGK 2.50 pada peringkat STPM / Matrikulasi KPM / Asasi;
Obtains a minimum CGPA of 2.50 at the STPM / KPM Matriculation / Foundation;

DAN / AND;

2. Mendapat sekurang-kurangnya Gred C (NGMP 2.00) pada peringkat STPM / Matrikulasi KPM / Asasi dalam mana – mana dua (2) mata pelajaran berikut:

- Biology
- Physics / Engineering Physics
- Chemistry / Engineering Chemistry
- Information and Communications Technology (ICT) / Computer Science
- Mathematics / Mathematics M / Mathematics T

Obtained at least Grade B (CGPA 2.00) at the STPM / KPM Matriculation / Foundation; level in the following subjects:

- *Biology*
- *Physics / Engineering Physics*
- *Chemistry/ Engineering Chemistry*
- *Information and Communications Technology (ICT) / Computer Science*
- *Mathematics / Mathematics M / Mathematics T*

DAN / AND;

3. Mendapat sekurang-kurangnya Gred C/Gred 6C pada peringkat SPM dalam mata pelajaran:

- Additional Mathematics / Mathematics; dan

Mana-mana satu (1) matapelajaran berikut:

- Sains
- Lukisan Kejuruteraan
- Pengajian Kejuruteraan Mekanikal
- Pengajian Kejuruteraan Awam
- Pengajian Kejuruteraan Elektrik Dan Elektronik
- Reka Cipta
- Teknologi Kejuruteraan
- Information And Communication Technology
- Sains Komputer
- Grafik Komunikasi Teknikal
- Additional Science
- Applied Science
- Produksi Multimedia
- Grafik Berkomputer
- Teknologi Binaan
- Prinsip Elektrik Dan Elektronik
- Aplikasi Elektrik Dan Elektronik
- Pemesinan Berkomputer
- Aplikasi Komputer Dalam Perniagaan

Obtained at least a Grade C/Grade 6C at SPM level in the following subject:

- *Additional Mathematics / Mathematics; and*

Any one (1) of the following subjects:

- Science
- Engineering Blueprint
- Mechanical Engineering Studies
- Civil engineering studies
- Electrical and Electronic Engineering Studies
- Design
- Engineering Technology
- Information And Communication Technology
- Computer Science
- Technical Communication Graphic
- Additional Science
- Applied Science
- Multimedia Production
- Computer graphics
- Construction Technology
- Electrical And Electronic Principles
- Electrical And Electronic Applications
- Computerized Machining
- Computer Applications In Business

DAN / AND;

- (a) Mendapat sekurang-kurangnya Tahap 3 (Band 3) dalam Malaysian University English Test (MUET).

Obtain at least Level 2 (Band 2) in the Malaysian University English Test (MUET).

DAN / AND;

- (b) Lulus ujian dan/atau temu duga yang ditetapkan oleh fakulti

Pass in tests and/or interviews for admission as required by faculty

ATAU / OR;

CALON LEPASAN STAM

TIDAK DITAWARKAN KEPADA CALON STAM

ATAU / OR;

APEL-A

1. Lulus Sijil Pelajaran Malaysia (SPM) dengan mendapat kepujian dalam mata pelajaran Bahasa Melayu/Bahasa Malaysia atau kepujian Bahasa Melayu / Bahasa Malaysia Kertas Julai dan lulus dalam mata pelajaran Sejarah;

Pass the Malaysian Education Certificate (SPM) with credits in Malay Language / Malaysia Language subject or credits in Malay Language / Malaysia Language in July papers and pass history subjects;

DAN / AND;

- a) Sijil Perakuan APEL MQA dengan mendapat Tahap 6 MQF;
MQA APEL Certificate with a Level 6 MQF;

DAN / *AND;*

- b) Mendapat sekurang-kurangnya **Kepujian** pada peringkat **SPM** dalam mata pelajaran:
● Mathematics
Obtained at least a Honour at SPM level in the following subject:
● *Mathematics*

DAN / *AND;*

- c) Mendapat sekurang-kurangnya Tahap 3 (Band 3) dalam Malaysian University English Test (MUET).
Obtain at least Level 3 (Band 3) in the Malaysian University English Test (MUET).

DAN / *AND;*

- d) Lulus ujian dan/atau temu duga yang ditetapkan oleh fakulti
Pass in tests and/or interviews for admission as required by faculty

Mod & Tempoh Program / *Mode of Study & Programme Duration*

- Mod Pengajian : Kerja Khusus / *Mode of Study: Course Work*
- Separuh Masa : 3 tahun / *Part Time : 3 years*
*Kuliah bermula 8pagi – 5petang, Sabtu - Ahad / *All lectures start from 8am – 5pm, Saturday – Sunday*

Keperluan Bahasa Inggeris / *Requirement for English Language*

Mendapat sekurang-kurangnya Tahap 3 (Band 3) dalam Malaysian University English Test (MUET).
Obtain at least Level 3 (Band 3) in the Malaysian University English Test (MUET).

Kelebihan Program / *Programme Advantages*

- Memenuhi keperluan MQA
Fulfill the MQA requirement
- Selaras dengan perkembangan ilmu semasa dan memenuhi kehendak industri dan pihak berkepentingan
In accordance with the current knowledge development and fulfil the industry needs and interested parties
- Melahirkan pengamal yang mahir dan berpengetahuan
Producing knowledgeable and skilled practitioner

Yuran Program / *Programme Fee*

Warganegara / *Citizens*

Yuran / <i>Fees</i>	Sepenuh Masa / <i>Full Time</i>
Semester pertama / <i>1st semester</i>	RM 4000.00
Semester seterusnya / <i>Subsequent semester</i>	RM 3500.00

Yuran secara pakej: RM21500.00 / *Tuition Fee as a Package: RM21500.00*

Cara untuk memohon / *How to apply*

Pendaftaran secara online melalui <http://smp.ukm.my/espeed/> setahun dua pengambilan (pengambilan Mac dan September). Yuran permohonan sebanyak RM50.00 (untuk pemohon tempatan) dan USD30.00 atau RM100.00 (untuk permohonan antarabangsa) dibuat ke akaun CIMB Bank Berhad atas nama Pusat Kembangan Pendidikan (8002233817).

Online registration via <http://smp.ukm.my/espeed/> (Mac and September Intake). Application fee of RM50.00 (for Malaysian application), USD30.00 or MYR100.00 (for International applicants) has be paid to Pusat Kembangan Pendidikan, CIMB account number (8002233817).

Modul Program untuk separuh masa / *Course Modules for part time*

Semester	Kod Kursus / <i>Course Code</i>	Nama Kursus / <i>Course Name</i>	Taraf Kursus / <i>Category</i>	Unit / <i>Units</i>
Semester I	LMCK1331	Komunikasi Efektif <i>Effective Communication</i>	C2	1
	LMCK1421	Pemikiran Kritikal & Penyelesaian Masalah <i>Critical Thinking & Problem Solving</i>	C3	1
	TTTT1013	Konsep & Pemikiran Sistem <i>System Concept & Thinking</i>	C5	3
	TTTT1713	Statistik & Kebarangkalian <i>Statistic & Probability</i>	C3	3
	TTTK1114	Pengaturcaraan Komputer <i>Computer Programming</i>	WP	4
	TTTR1333	Matematik Diskret <i>Discret Mathematic</i>	WP	3
	TTTM2033	Teknologi Platform <i>Platform Technology</i>	WP	3
Jumlah Unit / <i>Total Units</i>				18
Semester II	LMCE		WF/C2	2
	LMCW1022	Asas Keusahawanan dan Inovasi <i>Fundamentals of Entrepreneurship and Innovation</i>	CW	2
	LMCK1531	Kepimpinan & Kreativiti <i>Leadership & Creativity</i>	C4	1

	LMCK2711	Tanggungjawab Alam Sekitar <i>Environmental Responsibility</i>	C5	1
	TTTT1022	Analisis Data <i>Data analysis</i>	CW	2
	TTTT1964	Pangkalan Data <i>Database</i>	WP	4
	TTTK1143	Reka Bentuk Aturcara dan Penyelesaian Masalah <i>Program Design and Problem Solving</i>	WP	3
	TTTH2843	Pengaturcaraan Multimedia <i>Multimedia Programming</i>	WP	3
Jumlah Unit / Total Units				18
Semester Pendek	TTTK2323	Pengaturcaraan Mudah Alih <i>Mobile Programming</i>	Elektif	3
	TTTT1964	Pangkalan Data (*) <i>Database(*)</i>	Elektif	3
	* Kepada pelajar yang tiada latarbelakang pangkalan data * For students who don't have database background			3
Jumlah Unit / Total Units				3
Semester III	LMCW2173	Hubungan Etnik <i>Ethnic relationship</i>	CW	3
	LMCE1022	Workplace Communication	C2	2
	TTTU2983	Pangkalan Data Lanjutan <i>Advanced Databases</i>	WP	3
	TTTH3623	Pemodelan 3D <i>3D Modelling</i>	Elektif	3
Jumlah Unit / Total Units				11
Semester IV	LMCW1022	Asas Keusahawanan dan Inovasi <i>Basic Entrepreneurship and Innovation</i>	CW	2
	TTTP2543	Pengaturcaraan Web <i>Web Programming</i>	WP	3
	TTTH2304	Reka bentuk Perisian untuk Sistem Multimedia <i>Software Design for Multimedia Systems</i>	WP	4
	TTTH 3813	Realiti Maya <i>Visual Reality</i>	Elektif	3
Jumlah Unit / Total Units				12
Semester Pendek	TTTT4056	Latihan Industri <i>Industrial Training</i>	WP	6
	LMCE3011	Speech Communication	Citra	1
Jumlah Unit / Total Units				7
Semester V	TTTT1022	Analisis Data <i>Data Abalysis</i>	CW	2
	LMC-----2	Kursus Citra <i>Citra Course</i>	C1-C6	2
	TTTH4072	Usulan Projek <i>Project Proposal</i>	WP	2
	TTTH3404	Pembangunan Perisian untuk Sistem Multimedia <i>Software Development for Multimedia Systems</i>	WP	4

	TTTE3503	Pengujian Perisian <i>Software Testing</i>	WP	3
Jumlah Unit / Total Units				13
Semester VI	TTTT3013	Komputer, Etika dan Sosial <i>Computers, Ethics and Social</i>	C1	3
	TTTH4086	Projek Akhir <i>Final Project</i>	WP	6
	TTTE4333	Pengurusan dan Penyelenggaraan Perisian <i>Software Management and Maintenance</i>	WP	3
	Jumlah Unit / Total Units			
Semester Pendek	TTTT4076	Projek Industri <i>Industrial Project</i>	WP	6
	Jumlah Unit / Total Units			
Semester VII	**TTTT4056	Latihan Industri <i>Industrial Training</i>	WP	6
	**TTTT4076	Projek Industri <i>Industrial Project</i>	WP	6
	** Pelajar perlu mengikuti latihan industri di semester 7 jika tidak bekerja dalam sector ICT ** Students are required to undergo industrial training in the semester 7 if they are not working in the ICT sector.			
	Jumlah Unit / Total Units			
Jumlah Keseluruhan / Grand Total				122

**Nota: W = Wajib / *Compulsory*; P =Pilihan / *Elective* AU – Audit / *Audit*

*Subject to change

Sebarang pertanyaan lanjut, sila hubungi Penyelaras Program /
Any enquiry please contact Programme Coordinator

DR DAHLILA PUTRI DAHNIL SIKUMBANG
dahlilaputri@ukm.edu.my