

SARJANA MUDA KEJURUTERAAN MEKANIK

*BACHELOR OF
MECHANICAL ENGINEERING*



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Pengenalan | Introduction

Kejuruteraan mekanik merupakan bidang yang sangat luas. Oleh itu, jurutera mekanik berpeluang bekerja dalam pelbagai industri serta mereka bentuk pelbagai jenis produk. Jurutera mekanik membangunkan, mereka bentuk, membina, menguji dan memeriksa peranti serta sistem mekanikal seperti mesin, peralatan dan enjin. Mereka juga sering terlibat dalam perkembangan industri terkini, khususnya dalam bidang automasi dan robotik, tenaga alternatif serta nanoteknologi.

Program Kejuruteraan Mekanik menawarkan pelbagai peluang baharu untuk perkembangan kerjaya, seperti mereka bentuk projek pengeluaran bagi memanfaatkan kemajuan teknologi, menambah baik teknologi dalam bidang penjagaan kesihatan, atau mereka bentuk cip komputer yang lebih berkuasa untuk memenuhi keperluan era digital yang terus berkembang. Spektrum kerjaya yang luas membuka peluang kepada individu daripada pelbagai jantina, tahap keupayaan dan minat. Program Kejuruteraan Mekanik melahirkan tenaga mahir yang mempunyai kemahiran teknikal dan analitikal yang kompeten serta berupaya menyumbang secara berkesan dalam pelbagai bidang yang memerlukan kepakaran mereka.

Mechanical engineering is a very broad field; hence mechanical engineers can work in a variety of different industries as well as design a wide range of products. Mechanical engineers develop, design, build, test, and inspect mechanical devices and systems, such as machines, tools, and engines. Mechanical engineers often work on the newest industrial pursuits, particularly in automation and robotics, alternative energies and nanotechnology.

The Mechanical Engineering Programme offers new opportunities for occupational growth, such as designing production projects to harness developments, improvements of technology in healthcare, or designing more powerful computer chips for the ever-growing digital era. The wide career spectrum opens up opportunities for different genders, different levels of ability, and different interests. The key is that the Mechanical Engineering Programme develops a skilled personnel with competent technical and analytical skills that could be of good use wherever needed.

Objektif Pendidikan Program | Programme Educational Objectives (PEO)

PEO 1	Graduan menjadikan diri mereka sebagai profesional yang terlatih dalam bidang kejuruteraan Mekanik atau bidang yang berkaitan. <i>Graduates establish themselves as practicing professionals in Mechanical engineering or related fields.</i>
PEO 2	Graduan terlibat dalam pencarian pengetahuan sepanjang hayat dan pembelajaran antara disiplin yang sesuai untuk kerjaya industri dan akademik. <i>Graduates engage in lifelong pursuit of knowledge and interdisciplinary learning appropriate for industrial and academic careers.</i>
PEO 3	Graduan menyumbang kepada pembangunan lestari dan kesejahteraan masyarakat. <i>Graduates contribute to sustainable development and the well-being of society.</i>

Hasil Pembelajaran Program | Programme Learning Outcome (PLO)

Pada akhir program, graduan dapat:

At the end of the programme, graduates are able to:

PLO 1	Apply knowledge of mathematics, natural science, computing and engineering fundamentals, and an engineering specialization to develop solutions to complex mechanical engineering problems. (WK1-WK4)
PLO 2	Identify, formulate, research literature and analyze complex mechanical engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences and engineering sciences with holistic considerations for sustainable development. (WK1-WK4)
PLO 3	Design creative solutions for complex mechanical engineering problems and design systems, components or processes to meet identified needs with appropriate consideration for public health and safety, wholelife cost, net zero carbon as well as resource, cultural, societal, and environmental considerations as required. (WK5)
PLO 4	Conduct investigation of complex mechanical engineering problems using research methods including research-based knowledge, including design of experiments, analysis and interpretation of data, and synthesis of information to provide valid conclusions. (WK8)
PLO 5	Create, select and apply, and recognize limitation of appropriate techniques, resources, and modern engineering and IT tools, including prediction and modelling, to complex mechanical engineering problems. (WK2 and WK6)
PLO 6	Analyze and evaluate sustainable development impacts to: society, the economy, sustainability, health and safety, legal frameworks, and the environment, in solving complex mechanical engineering problems. (WK1, WK5, and WK7)
PLO 7	Demonstrate an understanding of the need for diversity and inclusion. Apply ethical principles and commit to professional ethics and norms of mechanical engineering practice and adhere to relevant national and international laws. (WK9)
PLO 8	Function effectively as an individual, and as a member or leader in diverse and inclusive teams and in multidisciplinary, face-to-face, remote and distributed settings. (WK9)
PLO 9	Communicate effectively and inclusively on complex mechanical engineering activities with the engineering community and with society at large, such as being able to comprehend and write effective reports and design documentation, make effective presentations, taking into account cultural, language, and learning differences.
PLO 10	Apply knowledge and understanding of mechanical engineering management principles and economic decision-making and apply these to one's own work, as a member and leader in a team, and to manage projects in multidisciplinary environments.
PLO 11	Recognise the need for, and have the preparation and ability for i) independent and life-long learning ii) adaptability to new and emerging technologies and iii) critical thinking in the broadest context of technological change. (WK8)

Pendidikan Berasaskan Hasil (OBE) | Outcome-Based Education (OBE)

Pendidikan Berasaskan Hasil (Outcome-Based Education, OBE) telah dilaksanakan di Fakulti Kejuruteraan sejak tahun 2004, selaras dengan arahan Kementerian Pengajian Tinggi Malaysia dan Lembaga Jurutera Malaysia (Board of Engineers Malaysia, BEM). Pelaksanaan OBE juga merupakan salah satu keperluan bagi Malaysia untuk menjadi ahli penuh Washington Accord (WA), iaitu sebuah perjanjian antarabangsa yang mengiktiraf secara bersama ijazah Sarjana Muda dalam bidang kejuruteraan.

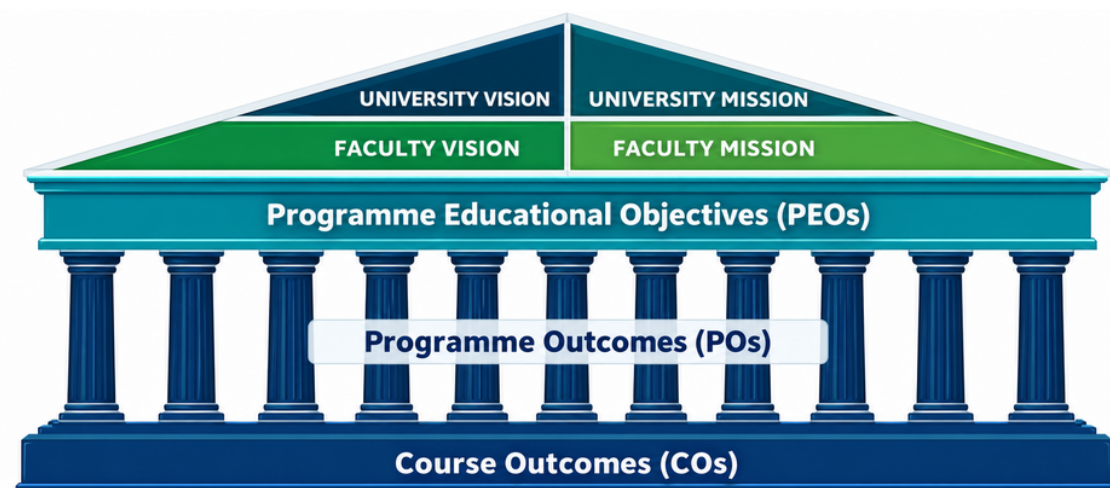
OBE merupakan model pendidikan yang diamalkan di peringkat antarabangsa dan memberi tumpuan kepada pengukuran hasil pembelajaran pelajar serta pelaksanaan tindakan penambahbaikan bagi mengatasi kekurangan dalam kaedah penyampaian kursus, kaedah penilaian, sikap pelajar dan aspek-aspek berkaitan. Kurikulum direka bentuk dengan hasil kursus (Course Outcomes, COs) yang khusus bagi mempersiapkan graduan untuk mencapai atribut graduan/hasil pembelajaran program (Programme Outcomes, POs) pada masa tamat pengajian.

POs pula dirangka bagi menghasilkan graduan yang bersedia untuk mencapai objektif pendidikan program (Programme Educational Objectives, PEOs) dalam tempoh 3 hingga 5 tahun selepas mereka menamatkan pengajian. PEOs dan POs telah dirumuskan melalui rundingan dengan semua pihak berkepentingan utama, termasuk majikan, alumni dan pelajar, bagi memenuhi tuntutan persekitaran pekerjaan yang semakin mencabar dan bersifat global.

Outcome-Based Education (OBE) had been implemented in the Faculty of Engineering since 2004, in accordance with the directives of the Ministry of Higher Education Malaysia and the Board of Engineers Malaysia (BEM). This is also one of the requirements for Malaysia to become a full member of the Washington Accord (WA), an international agreement to mutually recognize Bachelor degrees in the field of engineering.

OBE is an internationally practised educational model that focuses on the measurement of student outcomes and the implementation of corrective measures to overcome deficiencies in course delivery methods/assessment/student attitude, etc. Curriculum is designed with specific course outcomes (COs) to prepare the graduates to achieve the graduate attributes/programme outcomes (POs) at the point of graduation.

The POs are designed to produce graduates who are well-prepared to achieve the programme educational objectives (PEOs) 3 - 5 years after they have graduated. The PEOs and POs had been formulated in consultation with all major stakeholders (employers, alumni and students), to meet the demands of a challenging and globalized workplace.



PELAN PENGAJIAN SARJANA MUDA KEJURUTERAAN MEKANIK							
STUDY PLAN BACHELOR OF MECHANICAL ENGINEERING							
TAHUN SATU YEAR ONE							
Tahun Year	Komponen Component	SEMESTER 1			SEMESTER 2		
		Kod Code	Kursus Courses	Kredit Credit	Kod Code	Kursus Courses	Kredit Credit
1	Kursus Universiti University Courses	GIG1019	Aspirasi Negara Bangsa <i>Malaysian Nation-State Aspiration (Local Students ONLY)</i>	2	GIG1017	Falsafah dan Cabaran Semasa <i>Philosophy and Current Affairs (Local Students ONLY)</i>	2
		GLT1049	Bahasa Melayu Komunikasi 2 <i>Malay Language Communication 2 (International Students ONLY)</i>		GIG1018	Citra Malaysia* <i>Malaysian Citra* (International Students ONLY)</i>	
		GUL1001	UMLEADER 1: <i>Embrace@UMLEADER</i>	2	GLT10XX	Kursus Bahasa Universiti 1 <i>Language University Course 1</i>	2
	Kursus Teras Fakulti Faculty Core Courses	KIX1001	Matematik Kejuruteraan 1 <i>Engineering Mathematics 1</i>	3	KIX1002	Matematik Kejuruteraan 2 <i>Engineering Mathematics 2</i>	3
	Kursus Teras Program Program Core Courses	KIG1009	Statik <i>Statics</i>	3	KIG1013	Termodinamik Kejuruteraan 1 <i>Engineering Thermodynamics 1</i>	3
		KIG1010	Mekanik Bendalir 1 <i>Fluid Mechanics 1</i>	3	KIG1014	Mekanik Bahan 1 <i>Mechanics of Materials 1</i>	3
		KIG1011	Bahan Kejuruteraan 1 <i>Engineering Materials 1</i>	3	KIG1015	Dinamik <i>Dynamics</i>	3
		KIG1012	Reka Bentuk Kejuruteraan dan Pemodelan <i>Engineering Design and Modelling</i>	3	KIG1016	Pemesinan dan Proses Pembuatan <i>Machining and Manufacturing Processes</i>	4
	Jumlah Kredit Total Credit			19			20

PELAN PENGAJIAN SARJANA MUDA KEJURUTERAAN MEKANIK							
STUDY PLAN BACHELOR OF MECHANICAL ENGINEERING							
TAHUN DUA YEAR TWO							
Tahun Year	Komponen Component	SEMESTER 1			SEMESTER 2		
		Kod Code	Kursus Courses	Kredit Credit	Kod Code	Kursus Courses	Kredit Credit
2	Kursus Universiti University Courses	GLT10XX	Kursus Bahasa Universiti 2 <i>Language University Course 2</i>	2	GIG1016	Kursus Integriti dan Anti- Rasuah <i>Integrity and Anti-Corruption Course</i>	2
		GUL2007	UMLEADER 2: <i>Ignite@UMLEADER</i>	2	GLT2000	Bahasa Melayu Profesional Untuk Kerjaya & Organisasi <i>Professional Malay for Career and Organisation</i>	-
	Kursus Teras Fakulti Faculty Core Courses				KIX2006	Ekonomi Kejuruteraan dan Pengurusan Projek <i>Engineering Economics and Project Management</i>	3
	Kursus Teras Program Program Core Courses	KIG2012	Mekatronik 1 <i>Mechatronics 1</i>	3	KIG2017	Reka Bentuk Elemen Mesin <i>Design of Machine Elements</i>	3
		KIG2013	Pengaturcaraan Komputer <i>Computer Programming</i>	3	KIG2018	Termodinamik Kejuruteraan 2 <i>Engineering Thermodynamics 2</i>	3
		KIG2014	Mekanik Bendalir 2 <i>Fluid Mechanics 2</i>	3	KIG2019	Kaedah Berangka dan Statistik dalam Kejuruteraan <i>Numerical and Statistical Methods in Engineering</i>	3
		KIG2015	Mekanik Bahan 2 <i>Mechanics of Materials 2</i>	3	KIG2020	Mekatronik 2 <i>Mechatronics 2</i>	3
		KIG2016	Reka Bentuk dan Inovasi Produk <i>Product Design and Innovation</i>	3			
	Jumlah Credit Total Credit			19			17

PELAN PENGAJIAN SARJANA MUDA KEJURUTERAAN MEKANIK							
STUDY PLAN BACHELOR OF MECHANICAL ENGINEERING							
TAHUN TIGA YEAR THREE							
Tahun Year	Komponen Component	SEMESTER 1			SEMESTER 2		
		Kod Code	Kursus Courses	Kredit Credit	Kod Code	Kursus Courses	Kredit Credit
3	Kursus Universiti University Courses	GIG1003	Asas Pembudayaan Keusahawanan Basic Entrepreneurship Enculturation	2		Kursus Ko-kurikulum Co-curriculum Courses	2
	Kursus Teras Fakulti Faculty Core Courses	KIX2007	Jurutera Terimbuh Kecerdasan Buatan Artificial Intelligence Augmented Engineer	2	KIX2005	Undang-Undang, Etika dan Kemampanan untuk Jurutera Law, Ethics and Sustainability for Engineers	3
	Kursus Teras Program Program Core Courses	KIG3007	Reka Bentuk Berintegrasi 1 Integrated Design 1	3	KIG3011	Reka Bentuk Berintegrasi 2 Integrated Design 2	3
		KIG3008	Instrumentasi dan Teknik Pengukuran Instrumentation and Measurement Techniques	3	KIG3012	Kejuruteraan Kawalan Control Engineering	3
		KIG3009	Getaran Mekanikal Mechanical Vibrations	3	KIG3013	Pemindahan Haba Heat Transfer	3
		KIG3010	Bahan Kejuruteraan 2 Engineering Materials 2	3	KIG3014	Analisis Unsur Terhingga Finite Element Analysis	3
	Jumlah Credit Total Credit			16	17		

SEMESTER KHAS <i>SPECIAL SEMESTER</i>				
Tahun Year	Komponen Component	SEMESTER KHAS <i>SPECIAL SEMESTER</i>		
		Kod Code	Kursus Courses	Kredit Credit
3	Kursus Teras Program <i>Program Core Courses</i>	KIG3015	Latihan Industri <i>Industrial Training</i>	5
	Jumlah Credit <i>Total Credit</i>			5

PELAN PENGAJIAN SARJANA MUDA KEJURUTERAAN MEKANIK							
STUDY PLAN BACHELOR OF MECHANICAL ENGINEERING							
TAHUN EMPAT YEAR FOUR							
Tahun Year	Komponen Component	SEMESTER 1			SEMESTER 2		
		Kod Code	Kursus Courses	Kredit Credit	Kod Code	Kursus Courses	Kredit Credit
4	Kursus Teras Program Program Core Courses	KIG4052	Pemilihan Bahan dalam Reka Bentuk Mekanik Materials Selection in Mechanical Design	3	KIG4055	Projek Tahun Akhir 2 Final Year Project 2	3
		KIG4053	Pengurusan Pengeluaran dan Kendalian Production and Operations Management	3			
		KIG4054	Projek Tahun Akhir 1 Final Year Project 1	3			
	Kursus Elektif Program Program Elective Courses	KIG4XXX	Kursus Elektif Program 1 Program Elective Course 1	3	KIG4XXX	Kursus Elektif Program 3 Program Elective Course 3	3
		KIG4XXX	Kursus Elektif Program 2 Program Elective Course 2	3	KIG4XXX	Kursus Elektif Program 4 Program Elective Course 4	3
					KIG4XXX	Kursus Elektif Program 5 Program Elective Course 5	3
					KIG4XXX	Kursus Elektif Program 6 Program Elective Course 6	3
	Jumlah Kredit Total Credit				15		15
	Jumlah Keseluruhan Total Credits Overall						

KURSUS ELEKTIF PROGRAM PROGRAM ELECTIVE COURSES			
Bil. No.	Kod Kursus Course Code	Tajuk Kursus Course Title	Kredit Credit
1	KIG4056	Tribologi <i>Tribology</i>	3
2	KIG4057	Pemantauan Getaran dan Keadaan Mesin <i>Machinery Vibration and Condition Monitoring</i>	3
3	KIG4058	Kejuruteraan Akustik dan Kawalan Hingar <i>Engineering Acoustics and Noise Control</i>	3
4	KIG4059	Enjin Pembakaran Dalaman <i>Internal Combustion Engine</i>	3
5	KIG4060	Peralatan Penukar Haba <i>Heat Exchanger Equipments</i>	3
6	KIG4061	Ciri dan Aplikasi Pam <i>Pump Characteristics and Application</i>	3
7	KIG4062	Dinamik Bendalir Pengkomputeran <i>Computational Fluid Dynamics</i>	3
8	KIG4063	Pemanasan Pengudaraan Penyamanan Udara dan Penyejukan <i>Heating Ventilation Air Conditioning and Refrigeration</i>	3
9	KIG4064	Reka Bentuk Faktor Manusia <i>Human Factors Design</i>	3
10	KIG4065	Reka Bentuk Mampan <i>Sustainable Design</i>	3
11	KIG4066	Teknologi Pembuatan Pantas <i>Rapid Manufacturing Technology</i>	3
12	KIG4067	Strategi Pembuatan <i>Manufacturing Strategy</i>	3
13	KIG4068	Pembelajaran Mesin <i>Machine Learning</i>	3
14	KIG4069	Kejuruteraan Seramik <i>Ceramic Engineering</i>	3
15	KIG4070	Pemodelan Konstitutif Bahan <i>Constitutive Modeling of Materials</i>	3
16	KIG4071	Pembungkusan Elektronik <i>Electronic Packaging</i>	3
17	KIG4072	Analisis dan Pencegahan Kegagalan <i>Failure Analysis and Prevention</i>	3
18	KIG4073	Kejuruteraan Logam dan Alooi <i>Metals and Alloys Engineering</i>	3
19	KIG4074	Bahan Nano <i>Nanomaterials</i>	3
20	KIG4075	Kejuruteraan Polimer dan Getah <i>Polymer and Rubber Engineering</i>	3
21	KIG4076	Proses dan Teknologi Pembuatan Semikonduktor <i>Semiconductor Manufacturing Process and Technology</i>	3
22	KIG4077	Reka Bentuk Acuan dan Dai <i>Mold and Die Design</i>	3
23	KIG4078	Mikrofabrikasi dan Peranti <i>Microfabrication and Devices</i>	3

24	KIG4079	Teori dan Aplikasi dalam Pembentukan Logam <i>Theory and Applications in Metal Forming</i>	3
25	KIG4080	Robotik Industri <i>Industrial Robotics</i>	3
26	KIG4085	Kejuruteraan Kakisan <i>Corrosion Engineering</i>	3
27	KIG4086	Kejuruteraan Loji Kuasa <i>Power Plant Engineering</i>	3
28	KIG4087	Teknousahawanan dalam Kejuruteraan <i>Technopreneurship in Engineering</i>	3
29	KQK7002	Analisis Data Kejuruteraan <i>Engineering Data Analytics</i>	3
30	KQK7003	Kejuruteraan Sistem Haba <i>Thermal Systems Engineering</i>	3
31	KQK7004	Penukaran Tenaga Dan Penyimpanan <i>Energy Conversion And Storage</i>	3
32	KQK7005	Mekanik Gunaan <i>Applied Mechanics</i>	3
33	KQK7006	Kelesuan Dan Mekanik Retak <i>Fatigue And Fracture Mechanics</i>	3

PEJABAT TIMBALAN DEKAN (IJAZAH DASAR)

OFFICE OF DEPUTY DEAN (UNDERGRADUATE STUDIES)

Pejabat Ijazah Dasar bertujuan untuk membantu pelajar, serta menguruskan hal-hal ehwal berkenaan pengurusan program Sarjana Muda Fakulti Kejuruteraan.

The Office of the Deputy Dean (Undergraduate Studies) aims to assist students, as well as managing the Faculty of Education's Undergraduate programs.

AHLI PEJABAT IJAZAH DASAR | MEMBERS OF THE OFFICE

Timbalan Dekan (Ijazah Dasar) <i>Deputy Dean (Undergraduate Studies)</i>	Associate Prof. Dr. Raja Ariffin Raja Ghazilla r_ariffin@um.edu.my	
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Penolong Pendaftar (Ijazah Dasar) <i>Assistant Registrar (Undergraduate Studies)</i>	Nur Syazana Mohammad Nizar syazananzar@um.edu.my +603-7967 7636	
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Pembantu Tadbir Kanan <i>Senior Administrative Assistant</i>	Mechanical Engineering Admission Industrial Training	Norazirah Mohd Supi norazirah@um.edu.my

MAKLUMAT PERHUBUNGAN UTAMA PEJABAT

MAIN OFFICE CONTACT DETAILS

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Laman Web : **<https://engine.um.edu.my/>**
Website

MAKLUMAT AM PROGRAM SARJANA MUDA

UNDERGRADUATE PROGRAMME GENERAL INFO

TEMPOH PENGAJIAN

DURATION OF STUDY

Tempoh pengajian **minimum** dan **maksimum** pelajar mengikut program adalah seperti berikut.

The **minimum** and **maximum** duration of study for the respective programme as follow.

Program Programme	Tempoh Minimum Minimum Duration of Study	Tempoh Maksimum Maximum Duration of Study
1. Sarjana Muda Kejuruteraan Awam <i>Bachelor of Civil Engineering</i> 2. Sarjana Muda Kejuruteraan Bioperubatan <i>Bachelor of Biomedical Engineering</i> 3. Sarjana Muda Kejuruteraan Elektrik <i>Bachelor of Electrical Engineering</i> 4. Sarjana Muda Kejuruteraan Kimia <i>Bachelor of Chemical Engineering</i> 5. Sarjana Muda Kejuruteraan Mekanik <i>Bachelor of Mechanical Engineering</i>	8 Semester Biasa & 1 Semester Khas 8 Normal Semesters & 1 Special Semester	12 Semester Biasa 12 Normal Semesters

KURSUS UNIVERSITI

UNIVERSITY COURSES

Pelajar **WAJIB** menyempurnakan **kursus-kursus universiti** (setiap kursus membawa 2 jam kredit) berdasarkan penyempurnaan dan pelan pengajian program masing-masing.

Student are **REQUIRED** to complete **university courses** (each carries 2 credit) based on the respective study plan of the programme.

Pelajar Warganegara Local Student	Pelajar Antarabangsa International Student
- GIG1017 Falsafah dan Cabaran Semasa <i>Philosophy and Current Affairs</i> - GIG1019 Aspirasi Negara Bangsa <i>Malaysian Nation-State Aspiration</i> - GIG1003 Asas Pembudayaan Keusahawanan <i>Basic Entrepreneurship Enculturation</i> - GIG1016 Kursus Integriti dan Anti-Rasuah <i>Integrity and Anti-Corruption Course</i> - GLT2000 Bahasa Melayu Profesional Untuk Kerjaya & Organisasi (Tidak Berkredit) <i>Professional Malay for Career and Organisation (Non-Credit-Bearing)</i> - GLTXXXX Kursus Bahasa Inggeris Universiti 1/2 <i>Language University Courses 1/2</i> - GKXXXXX Kursus Ko-kurikulum <i>Co-curriculum Courses</i> - GUL1001 UMLEADER 1: Embrace@UMLEADER - GUL2007 UMLEADER 2: Ignite@UMLEADER	- GIG1018 Citra Malaysia <i>Malaysian Citra</i> - GIG1016 Kursus Integriti dan Anti-Rasuah <i>Integrity and Anti-Corruption Course</i> - GLT1049 Bahasa Melayu Komunikasi <i>Malay Language Communication</i> - GIG1003 Asas Pembudayaan Keusahawanan <i>Basic Entrepreneurship Enculturation</i> - GLTXXXX Kursus Bahasa Inggeris Universiti 1/2 <i>Language University Courses 1/2</i> - GKXXXXX Kursus Ko-kurikulum <i>Co-curriculum Courses</i> - GUL1001 UMLEADER 1: Embrace@UMLEADER - GUL2007 UMLEADER 2: Ignite@UMLEADER

KURSUS BAHASA INGGERIS UNIVERSITI LANGUAGE UNIVERSITY COURSES

Pelajar **WAJIB** menyempurnakan **DUA (2)** kursus Bahasa Inggeris. *Student are **REQUIRED** to complete **TWO (2)** English Language Communication courses (each carries 2 credit) according to the assigned pathway based on the results of the English Proficiency Test.*

Komunikasi (setiap kursus membawa 2 jam kredit) mengikut laluan yang telah ditetapkan berdasarkan pencapaian Ujian Kemahiran Bahasa Inggeris pelajar.

Semester Enrolment/ Path	PATH 1 Entry: A2/ B1 Exit: High B1/ Low B2	PATH 2 Entry: High B1/ Low B2 Exit: High B2/ Low C1	PATH 3 (Foreign Language) Entry: A1/ A2 Exit: B1
Semester 1 (if applicable) Placement test[#] <i>- for students without recognised English qualifications upon entry</i>	• CEFR A2 and B1 • MUET Band 2, 2.5, 3 & 3.5 • IELTS Band 4.0 – 5.0 • TOEFL Paper-Based Test (437 – 510) • TOEFL Computer-Based Test (123 – 180) • TOEFL Internet-Based Test (TBC) • TOEFL Essentials (Online) (Band 3 – 7.5) • PTE (Academic) – (10 – 41) • IGCSE/GCSE (English) (D, E, F, and G)	• CEFR B2 • MUET Band 4 & 4.5 • IELTS Band 5.5 – 6.0 • TOEFL Paper-Based Test (513 – 547) • TOEFL Computer-Based Test (183 – 210) • TOEFL Internet-Based Test (TBC) • TOEFL Essentials (Online) (Band 8 – 9.5) • PTE (Academic) – (42 – 57) • GCE A Level (English) (Minimum C) • IGCSE/GCSE (English) (C)	• CEFR C1 and C2 • MUET Band 5, 5+ & 6 • IELTS Band 6.5 – 9.0 • TOEFL Paper-Based Test (550 – 677) • TOEFL Computer-Based Test (213 – 300) • TOEFL Internet-Based Test (TBC) • TOEFL Essentials (Online) (Band 10 – 12) • PTE (Academic) (58 – 90) • GCE A Level (English) (A and B) • IGCSE/GCSE (English) (A and B)
Semester 2	Arts Stream GLT1050 Intermediate Reading and Writing for Social Sciences and Humanities	Arts Stream GLT1054 Advanced Reading and Writing for Social Sciences and Humanities	GLTxxxx Foreign Languages
	Science Stream GLT1051 Intermediate Reading and Writing for Science	Science Stream GLT1055 Advanced Reading and Writing for Science	
Semester 3	GLT1052 Intermediate Speaking Skills	GLT1056 Advanced Speaking Skills	GLTxxxx Foreign Languages

PETIKAN DARIPADA KAEDAH DAN PERATURAN

EXCERPTS FROM RULES AND REGULATIONS

PENDAFTARAN KURSUS

COURSE REGISTRATION

- Pelajar dikehendaki mengikuti program pengajiannya berdasarkan struktur program pengajian sepertimana yang ditentukan oleh Fakulti dan diluluskan oleh Senat.
 - Pendaftaran kursus hendaklah disempurnakan sebelum sesuatu semester bermula. Pelajar yang tidak menyempurnakan pendaftaran dalam tempoh yang ditetapkan tidak dibenarkan untuk mengikuti kursus berkenaan.
 - Pelajar bertanggungjawab menyemak dan memastikan kod kursus yang didaftar adalah betul. Selepas tamat tempoh yang ditetapkan, kursus yang didaftar adalah muktamad dan sebarang pindaan tidak dibenarkan
 - Jumlah kredit maksimum yang boleh didaftar oleh pelajar adalah seperti berikut:
- *A student is required to pursue his programme of study based on the structure of the programme of study as prescribed by the Faculty and approved by the Senate.*
 - *Registration for any course must be completed before the semester starts. Any student who does not complete his registration within the duration prescribed will not be allowed to pursue the course concerned.*
 - *A student is responsible to check and ensure that the course code that is registered for is correct. At the end of the prescribed period, the courses that are registered is final and no further changes are allowed.*
 - *The maximum number of credits which can be registered by a student is as follows:*

Status Pelajar <i>Student's Status</i>	Semester Biasa <i>Normal Semester</i>	Semester Khas <i>Special Semester</i>
Pelajar Biasa <i>Normal Student</i>	22 Kredit <i>22 Credits</i>	11 Kredit <i>11 Credits</i>
Pelajar di bawah Tempoh Pemerhatian Akademik (PEMERHATIAN) <i>Students under the Academic Probationary Period (PROBATION)</i>	15 Kredit <i>15 Credits</i>	9 Kredit <i>9 Credits</i>

KEHADIRAN

ATTENDANCE

- Pelajar **diwajibkan** menghadiri semua aktiviti pengajaran dan pembelajaran berkaitan dengan program pengajian yang diikutinya.
- Pelajar yang tidak menghadiri mana-mana aktiviti pengajaran dan pembelajaran dikehendaki memaklumkan alasan ketidakhadirannya kepada guru dengan segera dengan menyertakan dokumen sokongan yang berkaitan. Guru hendaklah memaklumkan kepada pelajar akibat ketidakhadiran dan bertanggungjawab menyimpan rekod pemakluman dan kehadiran kelas.
- *It is **compulsory** for a student to attend all teaching and learning activities related to his programme of study*
- *A student who does not attend any teaching and learning activities is required to inform the reason for his absence to the teacher immediately together with the relevant supporting documents. The teacher shall inform the student of the consequences of being absent and is responsible to keep the records of the notification and class attendance.*

SKIM PEMARKAHAN

GRADING SCHEME

Gred rasmi Universiti serta markah dan maksudnya adalah seperti berikut.

The official grade of the University and its meaning are as follow.

Markah Marks	Gred Grade	Mata Gred Grade Pointer	Maksud Meaning
90.00 - 100.00 80.00 - 89.99 75.00 - 79.99	A+ A A-	4.00 4.00 3.70	Amat Cemerlang <i>High Distinction</i> Cemerlang <i>Distinction</i> Cemerlang <i>Distinction</i>
70.00 - 74.99 65.00 - 69.99 60.00 - 64.99	B+ B B-	3.30 3.00 2.70	Kepujian <i>Good</i> Kepujian <i>Good</i> Kepujian <i>Good</i>
55.00 - 59.99 50.00 - 54.99	C+ C	2.30 2.00	Lulus <i>Pass</i> Lulus <i>Pass</i>
45.00 - 49.99 40.00 - 44.99 35.00 - 39.99 00.00 - 34.99	C- D+ D F	1.70 1.30 1.00 0.00	Gagal <i>Fail</i> Gagal <i>Fail</i> Gagal <i>Fail</i> Gagal <i>Fail</i>

- **Gred lulus** bagi semua kursus adalah **gred C**.
- Pelajar **hendaklah memperoleh PNG dan PNGK tidak kurang daripada 2.00** pada setiap semester sehingga tamat pengajiannya.
- *The **passing grade** for all courses is **grade C**.*
- *A student **shall obtain a GPA and CGPA of not less than 2.00** for each semester until the completion of his studies.*

RAYUAN TERHADAP KEPUTUSAN PEPERIKSAAN

APPEAL AGAINST EXAMINATION RESULTS

- Pelajar yang tidak berpuas hati dengan keputusan peperiksaannya termasuk komponen penilaian berterusan dan/atau peperiksaan akhir kursus boleh merayu untuk semakan semula keputusan peperiksaan. Rayuan hendaklah dibuat dalam tempoh tujuh (7) hari dari tarikh pengumuman rasmi keputusan peperiksaan.
- Satu (1) bayaran atas kadar yang ditetapkan hendaklah dikenakan bagi memproses rayuan untuk semakan semula keputusan peperiksaan. Bayaran itu tidak akan dikembalikan sama ada rayuan berjaya atau tidak.
- Borang rayuan tidak akan diterima sekiranya ia:
 - a) dikemukakan selepas tempoh yang dinyatakan dalam subperaturan (1) di atas;
 - b) tidak lengkap; atau
 - c) dikemukakan tanpa resit bayaran.
- *A student who is not satisfied with his examination results including the continuous assessment component and/or final examination of the course may appeal for a review of his examination results. The appeal shall be made within **seven (7) days** from the official date of announcement of his examination results.*
- *A payment based on the prescribed rate shall be made to process the application for examination results to be reviewed. The payment made is non-refundable regardless whether the appeal is successful or otherwise.*
- *The form for an appeal will not be accepted if it is:*
 - a) *submitted after the period stipulated in subregulation (1) above;*
 - b) *incomplete; or*
 - c) *submitted without the payment receipt*

ANUGERAH DEKAN

DEAN'S LIST AWARD

- Pelajar hendaklah memperolehi PNG dan **PNGK tidak kurang daripada 2.00** pada setiap semester sehingga tamat pengajiannya
- Pelajar yang mencapai PNG 3.70 dan ke atas bagi mana-mana semester dan memenuhi syarat berikut layak diberikan Anugerah Dekan bagi semester berkenaan.
 - a) Menyempurnakan sekurang-kurangnya 15 kredit dalam semester berkenaan yang mengandungi empat (4) kursus, tidak termasuk kursus yang kreditnya tidak diambil kira dalam pengiraan kredit kira.
 - b) Memperolehi tidak kurang daripada gred C bagi semua kursus yang disempurnakan dalam semester berkenaan; dan
 - c) Tidak pernah mengulang kursus yang gagal dan/atau mempertingkatkan gred kursus dalam semester berkenaan.
- *A student should strive to maintain a **CGPA of 2.00** and above each semester until the end of his/her studies.*
- *A student who obtains a GPA of 3.70 and above in any semester and fulfills the following conditions shall be awarded Dean's list Award for the semester.*
 - a) *has completed a minimum of 15 credits in the respective semester with a minimum of four (4) courses, not including courses which the credits are not taken into account in the calculation of credit counted.*
 - b) *has obtained not lower than a C grade for all the courses completed in the respective semester.*
 - c) *Has not repeat any of the course in which he has failed prior and/or improved his grade in the respective semester.*

GAGAL KELUAR DAN DITAMATKAN PENGAJIAN

FAILED AND TERMINATED FROM PROGRAMME OF STUDY

- Pelajar boleh gagal keluar dan ditamatkan daripada program pengajiannya sekiranya:
 - a) sedang berada dalam Tempoh Pemerhatian Akademik dan selepas itu mendapat PNG 1.30 atau kurang untuk dua (2) semester berturut-turut;
 - b) memperoleh PNG kurang daripada 2.00 untuk empat (4) semester berturut-turut;
 - c) memperoleh gred F sebanyak tiga (3) kali bagi kursus yang sama;
 - d) memperoleh PNGK kurang daripada 1.00 untuk dua (2) semester berturut-turut; atau
 - e) gagal menyempurnakan keperluan program pengajiannya dalam tempoh maksimum yang ditetapkan.
- *A candidate is termed as failed and terminated from the programme of study if:*
 - a) *is placed under an Academic Probationary Period and subsequently obtains a GPA of 1.30 or less for two (2) consecutive semesters;*
 - b) *obtains a GPA of less than 2.00 for four (4) consecutive semesters;*
 - c) *obtains a grade F three (3) times for the same course;*
 - d) *obtains a CGPA of less than 1.00 for two (2) consecutive semesters; or*
 - e) *fails to complete the requirements of his programme of study within the prescribed maximum period.*
- Apabila seseorang pelajar ditamatkan daripada program pengajiannya, notis penamatan hendaklah dihantar kepada pelajar oleh Universiti.
- *When a student has been terminated from his programme of study, the termination notice shall be sent to the student by the University*
- Mana-mana pelajar yang merayu dan diterima masuk semula akan ditamatkan pengajiannya sekiranya memperoleh PNG kurang daripada 2.00 pada semester di mana pelajar tersebut diterima masuk semula. Pelajar tersebut juga masih tertakluk kepada syarat-syarat seperti yang dinyatakan di dalam subperaturan (1) di atas.
- *Any student who appealed and is re-admitted after being terminated from his programme of study, shall have his study terminated if he obtains a GPA of less than 2.00 for the semester in which the student is re-admitted. The said student remains subjected to the conditions stated in the subregulation (1) above.*

PENGANUGERAHAN IJAZAH SARJANA MUDA LULUS DENGAN KEPUJIAN

CONFERMENT OF BACHELOR'S DEGREE WITH HONOURS

- Pelajar boleh dianugerahkan ijazah apabila telah memenuhi keperluan program pengajian seperti yang ditetapkan dalam Peraturan 46 di atas.
- Ijazah yang dianugerahkan adalah ijazah kepujian berdasarkan PNGK terakhir. Untuk melayakkan dianugerahkan ijazah Lulus Dengan Kepujian ini, **pelajar hendaklah mencapai PNGK terakhir tidak kurang daripada 2.00.**
- *A student may be awarded a degree once he has fulfilled the requirements of his programme of study as prescribed in Regulation 46 above.*
- *The degree awarded is an honours degree based on the final CGPA. In order to qualify to be awarded a Pass With Honours degree, the student shall obtain a final CGPA of not less than 2.00.*

PENGANUGERAHAN IJAZAH SARJANA MUDA LULUS DENGAN KEPUJIAN (DENGAN CEMERLANG)

CONFERMENT OF BACHELOR'S DEGREE WITH HONOURS (WITH DISTINCTION)

- Pelajar layak dianugerahkan ijazah Sarjana Muda Lulus Dengan Kepujian (Dengan Cemerlang) sekiranya:
 - a) mencapai PNGK terakhir 3.70 dan ke atas;
 - b) tidak pernah mendapat gred F bagi mana-mana kursus sepanjang tempoh program pengajiannya;
 - c) tidak pernah mengulang kursus yang gagal dan/atau mempertingkatkan gred kursus; dan
 - d) berjaya menamatkan program pengajian dalam tempoh minimum atau tempoh yang diluluskan.
- *A student is qualified to be awarded with Bachelor's Degree of a Pass With Honours (With Distinction) if he:*
 - a) *achieves a final CGPA of 3.70 and above;*
 - b) *has never obtained grade F for any course throughout the duration of his programme of study;*
 - c) *has never repeated any course where he failed and/or upgraded his course grade; and*
 - d) *has successfully completed his programme of study within the minimum duration or approved duration.*

Sila rujuk Pelan Pengajian Program serta **Kaedah-Kaedah & Peraturan-Peraturan Universiti Malaya (Ijazah Sarjana Muda) 2024**

*Kindly refer to your Programme Structure as well as the **Universiti Malaya (Bachelor's Degree) Rules and Regulations 2024***

KEMUDAHAN DAN PETA FAKULTI

FACILITIES AND FACULTY MAP



DIRECTORY BUILDING, FACULTY OF ENGINEERING UNIVERSITI MALAYA



Block A	Lecturer Rooms (Biomedical Engineering) / Biomedical Engineering Labs / Meeting Room		Block M	Level 1	FESEM Lab / Mechanical Engineering Lab
Block B	Lecture Hall 1 (DK1)			Level 2	CAREF Lab / Mechanical Engineering Labs
Block C	Level B	Mechanical Engineering Labs		Level 3	Mechanical Engineering Labs / Chemical Engineering Labs
	Level 1	Biomedical Engineering Labs / Green House (Outside)		Level 4	Mechanical Engineering Labs / Biomedical Engineering Labs / Electrical Engineering Labs
	Level 2	Biomedical Engineering Labs		Level 5	Postgraduate Rooms / Biomedical Engineering Labs / Electrical Engineering Labs
	Level 3	Biomedical Engineering Labs / Industrial Engineering Labs		Level 6	Library
	Level 4	Biomedical Engineering Labs / Industrial Engineering Labs	Block N	Civil Engineering Labs	
	Level 5	Industrial Engineering Labs / Mechanical Engineering Labs / Biomedical Engineering Labs		Block P	Civil Engineering Labs / Chemical Engineering Labs
Level 6	Industrial Engineering Labs		Block Q	Mechanical Engineering Labs	
Block D	Level 1	Idea Realization Cube (IR Cube) / Biomedical Engineering Labs	Block R	Mechanical Engineering Labs / Electrical Engineering Labs	
	Level 2	The Cube 1 (Red, Orange, Green, Purple)	Block T	Multiple Level Parking Block	
	Level 3	The Cube 2 (Red, Orange, Green) / BP204			
Block E	Postgraduate Rooms (Electrical Engineering) / Electrical Engineering Labs				
Block F	Civil Engineering Labs			Block U	Level 1
Blok G	Lecturer Rooms	Level 2	Classrooms (BK101 - BK105)		
	Civil Engineering Labs	Level 3	Classrooms (BK201 - BK205)		
	Postgraduate Rooms (Civil Engineering)	Level 4	Classroom (BK301) / Auditorium 1		
Block H	Canteen		Block V	Level 1	Lecturer Rooms (Chemical Engineering) / Chemical Engineering Labs / Meeting Room / Male & Female Prayer Room
Block J	Student Centre (Mechanical Engineering)			Level 2	Chemical Engineering Labs
	Level 2	Engineering Computer Center 1 (ECC1)		Level 3	Engineering Computer Center 4 (ECC4) / Engineering Computer Center 5 (ECC5) / The Purple Cube (meeting room) / Classrooms (BKK3 & BKK4)
	Level 3	Engineering Computer Center 2 (ECC2)	Block W	Chemical Engineering Labs / Postgraduate Rooms / Lecturer Rooms (Chemical Engineering) / Male & Female Prayer Room	
Block K	Student Workshop / Mechanical Engineering Labs			Block X	Mechanical Engineering Labs
	Male Prayer Room				
Block L	Level 1	Café / Gallery / E-Rock Shop (vending machine)	Block Y	Level 1	Lecture Hall 7/8/9 (DK7/DK8/DK9) / Auditorium 2 / The Cube 2 / Electrical Engineering Labs / Walkway to Faculty of Built Environment / Male & Female Prayer Room
	Level 2	Deputy Dean's (Development) Office / The Cube (meeting room) / Female Prayer Room / Infineon Corner (student study area) / Lecture Hall 4 (DK4) / Lecture Hall 5 (DK5)		Level 2	Lecturer Rooms (Electrical Engineering) / Electrical Engineering Labs / Meeting Room
	Level 3	Dean's Office / Faculty Manager Office / Finance Office / Deputy Dean's (Undergraduate Studies) Office / Deputy Dean's (Postgraduates Studies) Office		Level 3	Lecturer Rooms (Electrical Engineering) / Student Centre (Electrical Engineering) / Electrical Engineering Labs
	Level 4	Deputy Dean's (Research) Office / Deputy Dean's (Student Affairs) Office / Conference Room / Dean's Meeting Room / Lecture Hall 6 (DK6)		Level 4	Engineering Computer Center 6 (ECC6) / Engineering Computer Center 7 (ECC7) / Engineering Computer Center 8 (ECC8) / Electrical Engineering Labs
	Level 5	Lecturer Rooms / Meeting Room		Level 5	Electrical Engineering Labs
	Level 6	Head of Department's Office / Lecturer Rooms			
	Level 7	Lecturer Rooms			
	Level 8	Lecturer Rooms			