



**UNIVERSITI
KUALA LUMPUR**

**Malaysian Institute of Chemical &
Bioengineering Technology**

**Programme Handbook
Jan 2021 Intake**

Disclaimer:

*The Programme Handbook Diploma Jan 2021 Intake
is meant for the students for Diploma Jan 2021 Intake.*

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Vision & Mission of University

CORPORATE STRATEGY



UniKL
UNIVERSITI
KUALA LUMPUR



VISION

TO BE THE LEADING ENTREPRENEURIAL TECHNICAL UNIVERSITY




MISSION

TO PRODUCE ENTERPRISING GLOBAL TECHNOPRENEURS

Academic Activities Calendar 2020

SEMESTER REGISTRATION AND STUDENT STATUS	
DESCRIPTION	JANUARY SEMESTER
Semester Registration for New Students	24 January 2021
Classes	1 Feb 2021 – 2 April 2021 12 April - 4 June 2021
Mid Sem Break	5 April – 9 April 2021
Revision	7 June – 11 June 2021
FINAL EXAMINATION	14 June – 27 June 2021
SUBJECT REGISTRATION/ ADD/ DROP/WITHDRAWAL	
Add Subject (ONLINE - ECITIE)	Week 0 – 1
Drop Subject (ONLINE- ECITIE)	Week 1 – 4
Verifying Subject Registration (ONLINE - ECITIE)	Week 3 – 4
Correction of records only on: a) Wrong Subject Code b) Change Subject Group After Week 4 – Penalized at minimum RM50 for each request. After Week 9 - Penalized at minimum RM100 for each request.	Week 2 – 4
	Week 5 – 9
	Week 10 onwards
Subject Withdrawal (MANUAL - FORM)	Week 5 – 9
Subject Pre-Registration ONLINE – ECITIE	Week 11 – 12
FINAL EXAMINATION	
Draft of Final Examination Timetable released	Week 10
Final Examination Timetable released	Week 12
BAR List released	Week 17
FINAL EXAMINATION	

Academic Top Management Team UniKL MICET

	<p>Associate Professor Ts. Dr Ruzainah binti Ali@Jaafar Dean of UniKL MICET Email: ruzainah@unikl.edu.my Phone: 06-551 2146</p>
	<p>Dr Rapidah binti Othman Deputy Dean Academic and Technology Email: rapidah@unikl.edu.my Phone: 06-551 2016</p>
	<p>Mr Syed Azhar bin Syed Ab Rahman Deputy Dean Student Development & Campus Lifestyle Email: syedazhar@unikl.edu.my Phone: 06-551 2136</p>
	<p>Dr Raja Nazrul Hakim bin Raja Nazri Deputy Dean IIIP Email: rajanazrul@unikl.edu.my Phone: 06-551 2077</p>

Academic Staff Member of UniKL MICET

TECHNICAL FOUNDATION SECTION

NO.	NAME	HIGHEST QUALIFICATION	SL: STUDY LEAVE
			DESIGNATION
1.	ZAIDA RAHAYU BINTI YET (Head of Section)	MASTER OF SCIENCE	SENIOR LECTURER
2.	ABDUL HAKIM BIN HJ ABU BAKAR	MASTER ELECTRICAL ENGINEERING	SENIOR LECTURER
3.	ASIMI ANA BINTI AHMAD	MASTER OF ENGINEERING (CHEMICAL)	LECTURER
4.	AZLINA DIN	MASTER OF SCIENCE	LECTURER
5.	HANIZA BINTI KAHAR	MASTER OF SCIENCE	LECTURER
6.	IZUME AYUNA BINTI MOHAMED KHAMIL	MASTER OF INFORMATION TECHNOLOGY	LECTURER
7.	MOHD NASIR MAHMUD	MASTER OF MATHEMATICS	LECTURER
8.	MOHD ZULKHAIRI BIN ABDUL RAHIM (Dr)	PhD (CHEMISTRY)	SENIOR LECTURER
9.	MOHD NIZAM BIN ZAHARI	MASTER OF ENGINEERING TECHNOLOGY (GREEN & ENERGY EFFICIENT BUILDINGS)	LECTURER
10.	NAZATULSHIMA BINTI HASSAN (Dr)	PhD (BIOSTATISTIC)	LECTURER
11.	NURUL NABIHAH BINTI RAHMAN	MASTER OF ENGINEERING MATHEMATICS	LECTURER
12.	SITI HARTINI BINTI HAMDAN (Dr)	PhD (MECHANICAL ENGINEERING) TRIBOLOGY	SENIOR LECTURER
13.	SITI NUR ELMI BINTI ABDUL AZIZ	MASTER OF SCIENCE	LECTURER
14.	TEO SIEW HWAY	MASTER OF INFORMATION TECHNOLOGY	LECTURER
15.	YUSHAZAZIAH BINTI MOHD YUNOS	MASTER OF SCIENCE (MECHANICAL ENGINEERING)	LECTURER

PROCESS ENGINEERING TECHNOLOGY SECTION

NO.	NAME	HIGHEST QUALIFICATION	SL: STUDY LEAVE
			DESIGNATION
1.	MOHD. RAZEALY BIN ANUAR (Head of Section)	PhD (CHEMICAL ENGINEERING)	SENIOR LECTURER
2.	AHMAD AZAHARI BIN HAMZAH (Dr)	PhD (ELECTRICAL ENGINEERING)	SENIOR LECTURER
3.	AIZA SYUHANIZ BINTI SALLEH	MASTER OF ENGINEERING	LECTURER
4.	ALIFF RADZUAN BIN MOHAMAD RADZI (Dr)	PhD (CHEMICAL ENGINEERING)	SENIOR LECTURER
5.	AMIN SAFWAN BIN ALIKASTURI (Dr)	PhD (CHEMICAL ENGINEERING)	SENIOR LECTURER
6.	AZRIN BIN ABDUL RAHMAN	MASTER OF SCIENCE (PROCESS PLANT MANAGEMENT)	SENIOR LECTURER
7.	AZYYATI BINTI JOHARI	MASTER OF CHEMICAL ENGINEERING WITH ENTERPRENEUR	LECTURER
8.	FARIDAH BINTI GHAFAR (SL)	MASTER OF SCIENCE	SENIOR LECTURER
9.	ASSOC. PROF. Dr INDOK NURUL HASYIMAH BINTI MOHD AMIN	PhD (CHEMICAL ENGINEERING & PROCESS)	ASSOCIATE PROFESSOR
10.	ASSOC. PROF. Dr KELLY YONG TAU LEN	PhD (MECHANICAL SCIENCE & ENGINEERING)	ASSOCIATE PROFESSOR
11.	LAW JENG YIH (Dr)	PhD (CHEMICAL ENGINEERING)	LECTURER
12.	MARMY ROSHAIDAH BINTI MOHD SALLEH	MASTER OF ENGINEERING	LECTURER
13.	NADIA BINTI ISA (SL)	MASTER OF SCIENCE	LECTURER
14.	NAJUA DELAILA BINTI TUMIN	MASTER OF ENGINEERING(POLYMER)	SENIOR LECTURER
15.	NAZERAH BINTI AHMAD	MASTER OF ENGINEERING	LECTURER
16.	NOR AFIFAH BINTI KHALIL (Ts.)	MASTER IN ENG. TECH. (CHEMICAL ENGINEERING)	LECTURER
17.	NOR AINI BINTI BUROK (Ts.)	MASTER OF INDUSTRIAL SAFETY MANAGEMENT	SENIOR LECTURER
18.	NOR SHAHIRAH BINTI MOHD NASIR (Dr)	PhD (CHEMICAL ENGINEERING)	SENIOR LECTURER
19.	NORULAKMAL BINTI NOR HADI	MASTER OF SCIENCE	SENIOR LECTURER
20.	RABIATUL ADAWIAH BINTI MAT NOOR (SL)	MASTER OF SCIENCE	LECTURER
21.	SYAHIDI FADZLI BIN ALFAN	MASTER OF SCIENCE (INDUSTRIAL & TECHNOLOGY MANAGEMENT)	LECTURER

22.	SYED AZHAR BIN SYED AB RAHMAN	MASTER OF SCIENCE (CHEMICAL ENGINEERING)	SENIOR LECTURER
23.	WAN NOOR AIDAWATI BINTI WAN NADHARI (Dr.)	PhD (BIORESOURCE, PAPER AND COATINGS TECHNOLOGY)	SENIOR LECTURER
24.	ZAINAL ABIDIN BIN MOHD YUSOF (Ts.)	MASTER OF SCIENCE	SENIOR LECTURER
25.	ZULHAFIZ BIN TAJUDIN (Ts. Dr.)	PhD (CHEMICAL ENGINEERING)	SENIOR LECTURER
26.	ZURAIDAH BINTI RASEP (SL)	MASTER OF ENGINEERING	LECTURER

BIOENGINEERING TECHNOLOGY SECTION

NO.	NAME	HIGHEST QUALIFICATION	SL: STUDY LEAVE
			DESIGNATION
1.	FARA WAHIDA BINTI AHMAD HAMIDI (Head of Section)	MASTER OF SCIENCE (BIOPROCESS ENGINEERING)	LECTURER
2.	LEONG CHEAN RING (Dr)	PhD IN MEDICINE	SENIOR LECTURER
3.	MOHAMAD ZULKEFLEE BIN SABRI	MASTER OF ENGINEERING	LECTURER
4.	PROF. DR MOHD AZIZAN BIN MOHD NOOR	PhD (BIOCHEMISTRY)	PROFESSOR
5.	MUHAMAD YUSUF BIN HASAN (Ts.)	MASTER OF SCIENCE (PROCESS PLANT MANAGEMENT)	SENIOR LECTURER
6.	MUHAMMAD SHARIR BIN ABDUL RAHMAN	MASTER OF CHEMICAL ENGINEERING	LECTURER
7.	NIK IDA MARDIANA BINTI NIK PA	MASTER OF SCIENCE	LECTURER
8.	NORHANI BINTI JUSOH (SL)	MASTER OF ENGINEERING	SENIOR LECTURER
9.	NURDIYANA BINTI HUSIN	MASTER OF SCIENCE	LECTURER
10.	NURUL FAEZAWATY BINTI JAMALUDIN (Ts.)	MASTER OF SCIENCE	SENIOR LECTURER
11.	ROZYANTI BINTI MOHAMAD (Ts. Dr)	PhD (CHEMICAL ENGINEERING)	SENIOR LECTURER
12.	ASSOC. PROF. DR RUZAINAH BINTI ALI @JAAFAR	PhD (BIOTECHNOLOGY)	ASSOCIATE PROFESSOR
13.	SHARIFAH SOPLAH BINTI SYED ABDULLAH (Ts DR)	PhD (ENVIRONMENTAL ENGINEERING)	SENIOR LECTURER
14.	SHARIFAH MARIAM BINTI SAYED HITAM (Ts. Dr.)	PhD (BIOPROCESS ENGINEERING)	SENIOR LECTURER
15.	TONG WOEI YENN (Dr.)	PhD IN MICROBIOLOGY	SENIOR LECTURER
16.	ZAINATUL 'ASYIQIN BINTI SAMSU (Ts. Dr)	MASTER OF SCIENCE	LECTURER

ENVIRONMENT AND POLYMER ENGINEERING TECHNOLOGY SECTION

NO.	NAME	HIGHEST QUALIFICATION	SL: STUDY LEAVE
			DESIGNATION
1.	Ts. Dr NORILHAMIAH BINTI YAHYA (Head of Section)	PhD (FUEL CELL ENGINEERING)	SENIOR LECTURER

2.	AMELIA BINTI MD SOM (Dr)	PhD (GEOENVIRONMENT ENGINEERING)	SENIOR LECTURER
3.	AHMAD NAIM BIN AHMAD YAHAYA (Assoc. Prof. Ts. Dr.)	PhD (ENVIRONMENT ENGINEERING TECHNOLOGY)	ASSOCIATE PROFESSOR
4.	ELMY NAHIDA BINTI OTHMAN (Ts.)	INTERNATIONAL MASTER OF SCIENCE (RURAL DEVELOPMENT) (Erasmus Mundus Programme)	SENIOR LECTURER
5.	KHAIRUL NADIAH BINTI IBRAHIM	MASTER OF TECHNOLOGY	SENIOR LECTURER
6.	MOHD SYAZWAN BIN MOHD GHAZALI	MASTER OF SCIENCE	LECTURER
7.	NADIA BINTI RAZALI (Dr.)	PhD (CONSTRUCTION)	SENIOR LECTURER
8.	NOR ZALINA BINTI KASIM (Dr.)	PhD (CIVIL ENGINEERING)	SENIOR LECTURER
9.	NORHAYATI BINTI MOHD IDRUS	MASTER OF SCIENCE	LECTURER
10.	ROBERT THOMAS BACHMANN (Prof. Dr.)	PhD (ENVIRONMENTAL ENGINEERING TECHNOLOGY)	PROFESSOR
11.	SITI NOORAIN BINTI ROSLAN (Dr)	DOCTOR OF ENGINEERING (CIVIL & ENVIRONMENTAL ENGINEERING)	SENIOR LECTURER
12.	TENGKU FAZLI BIN TG JAYA @ TG YAHYA	MASTER OF ENGINEERING	SENIOR LECTURER
13.	AZANAM SHAH BIN HASHIM (Prof. Dato' Dr.)	DOCTOR OF ENGINEERING (MATERIAL SCIENCE)	PROFESSOR
14.	FAHMI ASYADI BIN MD YUSOF (SL)	MASTER OF ENGINEERING	SENIOR LECTURER
15.	MAZLINA BINTI GHAZALI (Ts.)	BACHELOR OF ENGINEERING (HONS) IN POLYMER ENGINEERING	ASST. LECTURER
16.	MOHD EDYAZUAN BIN AZNI (SL)	MASTER OF ENG. TECH. (GREEN & ENERGY EFFICIENT BUILDINGS)	LECTURER
17.	MUAZZIN BIN MUPIT (SL)	MASTER OF SCIENCE	SENIOR LECTURER
18.	MUZAFAR BIN ZULKIFLI (Ts. Dr.)	PhD (CHEMICAL ENGINEERING)	SENIOR LECTURER
19.	NOOR FAIZAH BINTI CHE HARUN (Dr)	DOCTOR OF ENGINEERING (ENVIRONMENTAL CHEMISTRY & ENGINEERING)	SENIOR LECTURER
20.	NOR NADIAH BINTI MOHAMAD YUSOF (Dr)	PhD (ENERGY & ENVIRONMENT SCIENCE)	SENIOR LECTURER
21.	ONG SIEW KOOI (Assoc. Prof. Ts. Dr.)	PhD (POLYMER TECHNOLOGY)	ASSOCIATE PROFESSOR
22.	RAJA NAZRUL HAKIM BIN RAJA NAZRI (Dr)	PhD (MATERIAL & METALLURGICAL ENGINEERING)	SENIOR LECTURER
23.	SUHAINI BINTI MAMAT	MASTER OF ENGINEERING	LECTURER
24.	YUSRIAH BINTI LAZIM (Dr.)	PhD IN MATERIAL SCIENCE AND ENG.	SENIOR LECTURER

25. ZAIHAR BIN YAACOB

MASTER OF ENGINEERING

SENIOR LECTURER

FOOD ENGINEERING TECHNOLOGY SECTION

NO.	NAME	HIGHEST QUALIFICATION	SL: STUDY LEAVE DESIGNATION
1.	SITI FATIMAH BINTI IBRAHIM (Dr.) (Head of Section)	PhD (CHEMICAL ENGINEERING)	SENIOR LECTURER
2.	ABDUL MANAN BIN DOS MOHAMED (Assoc. Prof. Dr.)	PhD (BIOSCIENCE & BIOTECHNOLOGY)	ASSOCIATE PROFESSOR
3.	FARAH SALINA BINTI HUSSIN	MASTER OF SCIENCE (FOOD TECHNOLOGY)	SENIOR LECTURER
4.	HARUN BIN SARIP (Assoc. Prof. Ts. Dr.)	PhD (FOOD TECHNOLOGY)	ASSOCIATE PROFESSOR
5.	KHAIRUL FAIZAL BIN PA'EE (Dr.)	PhD (FOOD & NUTRITIONAL SCIENCE)	SENIOR LECTURER
6.	LILY SUHAILA BINTI YACOB	MASTER OF ENVIRONMENT (ENVIRONMENTAL SCIENCE)	LECTURER
7.	MASNIZA BINTI MOHAMED @ MAHMOOD	MASTER OF SCIENCE	SENIOR LECTURER
8.	MAZIDAH ABDUL RAHMAN (Ts. Dr.)	PhD (SCIENCE FOOD TECHNOLOGY)	SENIOR LECTURER
9.	NOR RAIHANA BINTI MOHAMED ZAM (Dr.)	PhD (NUTRITION)	SENIOR LECTURER
10.	NOR ZANARIAH BINTI SAFIEI (Dr.)	PhD (CHEMICAL ENGINEERING)	SENIOR LECTURER
11.	NORIZA BINTI AHMAD (Ts. Dr)	PhD (FOOD SCIENCE & TECHNOLOGY)	SENIOR LECTURER
12.	NORZAHIR SAPAWE (Assoc. Prof. Dr)	PhD (CHEMICAL ENGINEERING)	ASSOCIATE PROFESSOR
13.	NUR AQILAH BINTI HAMIM (Ts.) (SL)	BACHELOR OF PLANT BIOTECHNOLOGY	SPECIALIST
14.	RINANI SHIMA BINTI ABD. RASHID (SL)	MASTER OF SCIENCE (FOOD TECHNOLOGY)	SENIOR LECTURER
15.	SHAHRULZAMAN BIN SHAHARUDDIN (Dr.)	PHISOLOPHY DOCTORATE OF BIOPROCESS ENG.	SENIOR LECTURER

CHEMICAL ENGINEERING SECTION

NO.	NAME	HIGHEST QUALIFICATION	SL: STUDY LEAVE
			DESIGNATION
1.	WONG CHEE SIEN (Dr.) (Head of Section)	PhD (BIOPROCESS ENGINEERING)	SENIOR LECTURER
2.	CHIN LIP HAN (Dr.)	PhD (CHEMICAL ENGINEERING)	SENIOR LECTURER
3.	CHONG YUAN FOONG (IR.)	BACHELOR	SPECIALIST
4.	FARRA WAHIDA BINTI SHAARANI	MASTER OF SCIENCE	SENIOR LECTURER
5.	NOOR AINA BINTI MOHD NAZRI (Dr.)	PhD IN ENGINEERING (GAS)	SENIOR LECTURER
6.	NOR NABIHA BINTI MD ZAN	MASTER (ENGINEERING SCIENCE)	LECTURER
7.	RAPIDAH BINTI OTHMAN (Dr)	PhD (CHEMICAL ENGINEERING)	SENIOR LECTURER
8.	SITI NURUL ATIKAH BINTI ABD HALIM (Dr.)	PhD (CHEMICAL ENGINEERING)	SENIOR LECTURER
9.	YUHANEES BINTI MOHAMED YUSOF (Dr.)	PhD (APPLIED SCIENCE)	SENIOR LECTURER
10.	SUZANA BINTI WAHIDIN (Dr)	PhD (BIOPROCESSING ENGINEERING)	SENIOR LECTURER

STUDENT DEVELOPMENT SECTION

NO.	NAME	HIGHEST QUALIFICATION	SL: STUDY LEAVE
			DESIGNATION
1.	AZU FARHANA BINTI ANUAR (Head of Section)	MASTER OF ARTS (ENGLISH COURSE)	LECTURER
2.	ANISAH BAHYAH AHMAD (Dr.)	PhD (ISLAMIC CIVILIZATION)	SENIOR LECTURER
3.	AZMAN BIN YUSOF (Assoc. Prof. Dr.)	PhD (PHILOSOPHY AND CIVILIZATION STUDIES)	ASSOCIATE PROFESSOR
4.	INTAN NORJAHAN BINTI AZMAN	MASTER OF ARTS IN ENGLISH LANGUAGE	LECTURER
5.	MARIATI BINTI MOHD SALLEH	MASTER OF EDUCATION	LECTURER
6.	NOORHAYATI BINTI SAHARUDDIN	MASTER OF ARTS IN ENGLISH LANGUAGE	SENIOR LECTURER
7.	ROSIAH BINTI OTHMAN	MASTER OF CORPORATE COMMUNICATION	LECTURER
8.	SA'ADIAH BINTI HUSSIN	MASTER OF SCIENCE (CORPORATE COMMUNICATION)	SENIOR LECTURER

IIIP SECTION

NO.	NAME	HIGHEST QUALIFICATION	SL: STUDY LEAVE
			DESIGNATION
1.	ABD RAZAK BIN HAJI MOHD YUSOFF	MASTER OF BUSINESS ADMINISTRATION	LECTURER
2.	NORAZMI BIN OMAR	MASTER OF BUSINESS ADMINISTRATION	LECTURER

PROGRAMME EDUCATIONAL OBJECTIVES (PEO)

- 1) Knowledgeable, competent, and innovative;
- 2) Effective leaders with teamwork, skills as well as verbal and non-verbal interpersonal communications skill;
- 3) Committed towards the importance of lifelong learning and continuous improvements;
- 4) Professional, ethical, and socially responsible; and
- 5) Capable of embarking on business and technopreneurial activities.

PROGRAMME LEARNING OUTCOMES (PLO)

PLO 1	Apply the knowledge of mathematics, science and chemical engineering technology fundamentals and specialization principles to well defined practical procedures and practices.
PLO 2	Conduct investigations of well-defined problems.
PLO 3	Apply and utilize appropriate techniques, resources and engineering tools to well defined engineering activities, with an awareness of their limitations.
PLO 4	Analyze well defined chemical engineering technology problems and area of specialization.
PLO 5	Formulate solutions to well defined technical problems
PLO 6	Assist in the formulation of systems, components or processes to meet specified needs.
PLO 7	Communicate effectively with the engineering community and society at large.
PLO 8	Demonstrate an awareness of and consideration for societal, health, safety, legal and cultural issues and their consequent responsibilities.
PLO 9	Demonstrate an understanding of the impact of engineering practices, taking into account the need for sustainable development.
PLO 10	Function effectively as an individual and as a member or leader in diverse technical teams.
PLO 11	Demonstrate an understanding of professional ethics, responsibilities and norms of chemical engineering technology practices.
PLO 12	Recognize the requirements for the need of professional development and to engage in independent and lifelong learning.
PLO 13	Demonstrate an awareness of management, business practices and entrepreneurial competencies.

TYPES OF COURSES

- 1. NATIONAL REQUIREMENT**
- 2. UNIVERSITY REQUIREMENT**
- 3. COMMON CORE**
- 4. DISCIPLINE CORE**

NATIONAL REQUIREMENT

MPU2313 AMALAN ISLAM DI MALAYSIA
MPU2323 RELIGIOUS PRACTICES IN MALAYSIA
MPU2213 BAHASA KEBANGSAAN (A)
MPU2232 INTERPERSONAL SKILLS
MPU 2133 BAHASA MELAYUKOMUNIKASI 1
MPU 2163 PENGAJIAN MALAYSIA 2
MPU2412 CAREER GUIDANCE 1
MPU2422 COMMUNITY SERVICE1
MPU2432 CULTURE 1
MPU2442 RAKAN MASJID 1
MPU2452 SISWA-SISWI BOMBA DAN PENYELAMAT 1
MPU2462 SISWA-SISWI PERTAHANAN AWAM 1
MPU2472 SPORTS MANAGEMENT 1
MPU2482 PERSONAL FINANCIAL MANAGEMENT 1

MPU2313 AMALAN ISLAM DI MALAYSIA

Kursus ini membincangkan aspek-aspek amalan islam yang diaplikasikan di Malaysia. Perbincangan ini meliputi konsep manusia dan agama, asas-asas Islam dan sejarah kedatangan agama Islam di Malaysia serta menerangkan keistimewaan Islam melalui institusi pendidikan, kekeluargaan, ekonomi dan pentadbiran di Malaysia. Disamping itu, perbincangan juga dilengkapi dengan isu-isu semasa dalam masyarakat berlandaskan ajaran Islam

Learning Outcomes:

Setelah tamat kursus ini, pelajar akan dapat:

1. Menghuraikan konsep manusia dan agama, asas-asas Islam dan sejarah kedatangan agama Islam di Malaysia.
2. Menguasai ibadat solat dengan betul, menghafal doa-doa selepas solat dan menghafal ayat-ayat al-Quran yang ditetapkan
3. Menerangkan keistimewaan Islam melalui institusi pendidikan, kekeluargaan, ekonomi dan pentadbiran di Malaysia
4. Menjelaskan isu-isu semasa dalam masyarakat berlandaskan ajaran Islam

References:

1. Azis Jakfar Soraji. (2012). *Pengajian Islam*. Shah Alam, Oxford Fajar.
2. Nasrudin Yunos et.al (2007). *Pengajian Islam*. Shah Alam, Oxford Fajar.
3. Paizah Ismail, (2008) *Hudud: Hukum dan Pelaksanaan*. Shah Alam: Karya Bestari.

MPU2323 RELIGIOUS PRACTICES IN MALAYSIA

This course enables students to understand their roles in developing the nation by exposing them to the influence of religions on the lives of Malaysians. Students should also be able to understand their roles as members of the society according to the constitutions of Malaysia.

Learning Outcomes:

Upon completion of this course students should be able to:

1. Explain the concept of man and religion
2. Describe the practices of religion as stated in Malaysian constitution
3. Explain current issues related to various religions practiced in Malaysia.

References:

1. Saw Swee-Hock (2015). *The Population of Malaysia (Second Edition)*, ISEAS Publishing, Singapore.
2. Mohd. Azizuddin Mohd Sani (2014), *Politics of Religious Expression in Malaysia*. ISEAS Publishing, Singapore.
3. Gerhard Hoffstaedter (2011), *Modern Muslim Identities: Negotiating Religion and Ethnicity in Malaysia*. NIAS Press.

MPU2213 BAHASA KEBANGSAAN (A)

Kursus ini menawarkan kemahiran berbahasa dari aspek mendengar, bertutur, membaca dan menulis sesuai dengan tahap intelek pelajar. Tujuan kursus ini adalah untuk meningkatkan kecekapan berbahasa dalam konteks rasmi. Pengajaran dan pembelajaran akan dilaksanakan dalam bentuk kuliah, tutorial, tugas, aktiviti kebahasaan, main peranan (role-play) dan ujian. Pada akhir kursus ini, pelajar diharapkan dapat menguasai kemahiran berbahasa secara lisan dan tulisan.

Learning Outcomes:

Setelah tamat kursus ini, pelajar akan dapat:

1. Bertutur dengan berkesan dalam situasi rasmi dan tidak rasmi.
2. Menghasilkan penulisan yang jelas dan sistematik.
3. Membina hubungan baik dalam kerja berpasukan / organisasi.

References:

1. Siti Hajar Abdul Aziz. (2011) *Bahasa Melayu 1*. Kuala Lumpur: Oxford Fajar
2. Adenan Ayob (2009). *Bahasa Kebangsaan*. Shah Alam. Oxford Fajar.
3. Nik Safiah Karim et al. (2006) *Tatabahasa Dewan*. Kuala Lumpur: Dewan Bahasa dan Pustaka.
4. Dewan Bahasa dan Pustaka (2007). *Kamus Dewan*. Edisi Keempat. Kuala Lumpur: Dewan Bahasa dan Pustaka, Kementerian Pendidikan Malaysia

MPU2232 INTERPERSONAL SKILLS

This course aims directly at fostering one's aspect of interpersonal skills namely communication skills, leadership, problem solving and decision making skills. Students' abilities to participate and interact with others effectively are addressed through individual tests and group projects

Learning Outcomes:

Upon completion of this course students should be able to:

1. Apply the principles of intrapersonal skills.
2. Communicate effectively using various communication media.
3. Demonstrate leadership and teamwork skills.

References:

1. Wood, J.T. (2016) *Interpersonal Communication: Everyday Encounters*. 8th Edition. Chapel Hill: University of North Carolina.
2. Robbins, S. P. & Hunsaker, P. L. (2012). *Training in interpersonal skills: tips for managing people at work*. Boston: Prentice Hall.
3. Pace, J. (2006). *The workplace: Interpersonal strengths and leadership*. Boston: McGraw Hill.

MPU 2133 BAHASA MELAYU KOMUNIKASI 1

Kursus ini melatih pelajar antarabangsa untuk berkomunikasi dalam Bahasa Melayu asas yang meliputi situasi kehidupan harian. Pelajar akan diperkenalkan dengan pertuturan dan penulisan Bahasa Melayu mudah. Pengajaran dan pembelajaran akan dilaksanakan dalam bentuk kuliah tutorial, tugas dan pengalaman pembelajaran pelajar di dalam dan di luar kelas. Pada akhir kursus ini, pelajar diharapkan dapat berkomunikasi dan menggunakan ayat mudah dengan berkesan.

Learning Outcomes:

Upon completion of this course students should be able to:

1. Menerangkan kandungan teks penuh yang menggunakan ayat mudah dan ayat berlapis.
2. Bertutur dalam pelbagai situasi dengan menggunakan ayat mudah dan ayat berlapis.
3. Menyusun idea secara kreatif dan sistematik dalam penulisan karangan pendek

References:

1. Kamarul Afendey Hamimi. 2015. Bahasa Melayu Komunikasi Oxford Fajar Sdn.Bhd Zarina Othman, Roosfa Hashim & Rusdi Abdullah.2012. Modul Komunikasi Bahasa Melayu Antarabangsa ,KPT: Penerbit UKM Press.
2. Yong Chyn Chye, Rohaidah Mashudi, Maarof Abd Rahman, 2012. Bahasa Kebangsaan untuk pelajar luar negara: Malay language for international students. Petaling Jaya : Pearson Malaysia.
3. Adenan Ayob. 2009. Bahasa Kebangsaan. Shah Alam: Oxford Fajar.
4. Siti Hajar Abdul Aziz. 2008. Siri Pendidikan Guru Bahasa Melayu I. Shah Alam: Oxford Fajar Sdn. Bhd.

MPU 2163 PENGAJIAN MALAYSIA 2

Kursus ini membincangkan Sejarah dan Politik, Perlembagaan Malaysia, system dan Struktur Pentadbiran Negara dan agama Kepercayaan. Kursus ini adalah bertujuan untuk melahirkan graduan yang mempunyai identity kebangsaan dan semangat patriotism yang unggul. Pengajaran dan pembelajaran akan dilaksanakan dalam bentuk kuliah, tugas, peperiksaan dan pengalaman pembelajaran.

Learning Outcomes:

Upon completion of this course students should be able to:

1. Menghurai dan mambahaskan kepelbagaian dalam masyarakat.
2. Mengulas kepentingan identity kebangsaan ke arah mengukuhkan semangat patriotisme
3. Membina dan memupuk hubungan dan interaksi social dalam kalangan pelajar.

References:

1. Mardiana Nordin & Hasnah Hussiin. 2014. Pengajian Malaysia (Edisi Kelima), Shah Alam : Oxford Fajar .

MPU2412 CAREER GUIDANCE 1

This course is one of the co-curriculum modules offered to develop well-rounded individuals through involvement in social and community activities. Specifically, it enables student to understand the important of career planning. It also promotes soft skills that can be applied in their future careers. Apart from that, it creates a better understanding about potential employers' expectations in job hunt.

Learning Outcomes:

Upon completion of this course students should be able to:

1. Apply appropriate interpersonal skills in building up their own towering personalities.
2. Differentiate their self-concept and self-image which reflect their personalities.
3. Demonstrate ability to plan their future career and targets.

References:

1. Devito, J. A. (2013). The interpersonal communication book (13thed.). U.S.A. Pearson
2. Zulkifli Musa (2008). Malaysia Job Seeker's Dilemma: A Practical Guide on How to Land a Dream Job. Kuala Lumpur: true Wealth Publishing.
3. James A. Athanasou & Raoul Van Esbroeck (2008). International handbook of career guidance. Springer.

MPU2422 COMMUNITY SERVICE 1

This course is one of the co-curriculum modules offered to develop well-rounded individuals through involvement in social and community activities. Specifically, it aims to develop interest among the students to participate in community programs. It also enables student to understand the important of performing of community services and the ways to implement the programmes and activities. Besides that, it provides better understanding to the student on the values, ethics and benefits of carrying out community service programmes.

Learning Outcomes:

Upon completion of this course students should be able to:

1. Organize and participate in the community service programmes and activities.
2. Apply knowledge learnt in course in community service programmes and activities
3. Demonstrate basic entrepreneurship skills in community service programmes and activities
4. Explain the values, ethics and benefits of participating in community service programmes and activities

References:

1. Christine M. Cress, Peter J. Collier & Vicki L. Reitenauer. 2013. *Learning Through Serving: A Student Guidebook for Service-Learning and Civic Engagement Across Academic Disciplines and Cultural Communities*. US: Stylus.
2. Pusat Transformasi Komuniti Universiti. 2013. *Berilmu Berbakti 2012: Penglibatan Komuniti Untuk Penjanaan dan Perkongsian Ilmu*. Serdang: Penerbit Universiti Putra Malaysia.
3. Saran Kaur Gill, Prabha Deri & Kamelia Shamsuddin. 2012. *The Power of Community Engagement: A Selection of Inspiring Initiatives*. Bangi: Penerbit Universiti Kebangsaan Malaysia.

MPU2432 CULTURE 1

This course is one of the co-curriculum modules offered to develop well-rounded individuals through involvement in social and community activities. Specifically, it aims to develop students' personalities and social interaction skills, as well as foster closer relationship among the student in the university through the organization of and participation in cultural activities.

Learning Outcomes:

Upon completion of this course students should be able to:

1. Apply knowledge gained in planning and organizing a cultural event.
2. Demonstrate appropriate skills in participating in a cultural event.
3. Explain the benefits of participating in a cultural activity.

References:

1. Hatta. 2013. Teater Filem dan Pengurusan Seni. Kuala Lumpur; Dewan Bahasa dan Pustaka.
2. Ab Samad Kechot & Sabzali Musa Kahn. 2011. Pengurusan Artistik: Kajian Mengenai Peranan Set Selaku Tenaga Kreatif Dalam Seni Persembahan Pentas di Malaysia. Bangi: Universiti Kebangsaan Malaysia.
3. Norliza Rofli & Eddin Khoo. 2009. Malaysian Culture: An Introduction. Kuala Lumpur: Jabatan Kebudayaan dan Kesenian Negara.

MPU2442 RAKAN MASJID 1

This course is one of the co-curriculum modules offered to develop well-rounded individuals through involvement in social and community activities. Specifically, it aims to develop students' who understand their roles as Muslims and are responsible to develop the ummah. This course also aims to expose students to the function of mosque as the main institution in developing the Muslim society.

Learning Outcomes:

Upon completion of this course students should be able to:

1. Explain the beauty of Islam in every aspect in their life.
2. Demonstrate several activities in relation to the Muslim practice.
3. Discuss the significance of the organized activities in the course

References:

1. Mohd Ismail Mustari & Kamarul Hasmi Mustari (2008). Pengimarahen Masjid dalam agenda ummah. Universiti Teknologi Malaysia Press: Skudai
2. Mohd Ismail Mustari & Kamarul Hasmi Mustari (2008). Fungsi dan peranan masjid dalam masyarakat. Universiti Teknologi Malaysia Press: Skudai.
3. Mohd Ismail Mustari & Kamarul Hasmi Mustari (2008). Pengurusan berkualiti memacu kecemerlangan pengurusan masjid. Universiti Teknologi Malaysia Press: Skudai.

MPU2452 SISWA-SISWI BOMBA DAN PENYELAMAT 1

This course is one of the co-curriculum modules offered to develop well-rounded individuals through involvement in social and community activities. Specifically, it gives exposure on the introduction to Malaysian Fire Rescue Department, foot marching techniques, fire rescue, ascending and descending technique and basic emergency aid.

Learning Outcomes:

Upon completion of this course students should be able to:

1. Participate actively in Project (theory and practically about BOMBA activities).
2. Communicate and demonstrate leadership and team skills through BOMBA activities (rescue, fire rescue and first aid).
3. Apply appropriate fundamental of rescue, fire rescue and first aid.

References:

1. Akademi Bomba & Penyelamat Malaysia. 2012. *Mencari dan Menyelamat*. Jabatan Bomba dan Penyelamat Malaysia: Kuala Lumpur.
2. Akademi Bomba dan Penyelamat Malaysia. 2012. *Pengenalan Tali, Simpulan dan Ikatan*. Jabatan Bomba dan Penyelamat Malaysia: Kuala Lumpur.
3. Akademi Bomba & Penyelamat Malaysia. 2012. *Kawad Operasi Kebombaan*. Jabatan Bomba dan Penyelamat Malaysia: Kuala Lumpur.

MPU2462 SISWA-SISWI PERTAHANAN AWAM 1

Kursus ini memfokuskan perbincangan tentang peranan dan fungsi Angkatan Pertahanan Awam dan mengaplikasi ilmu pengetahuan dalam pertolongan cemas, dan kawad kaki. Melalui aktiviti seperti ini, pelajar dapat membuat perancangan, perlaksanaan tugas, pertolongan kecemasan dan aktiviti kebakaran

Learning Outcomes:

Upon completion of this course students should be able to:

1. Memberi peluang kepada pelajar mendapat pengetahuan dan kemahiran untuk membantu diri sendiri dan orang lain.
2. Memupuk nilai/sikap hormat menghormati, menurut perintah, berdisiplin, bekerjasama, bertanggungjawab, berhemah, kejujuran, keyakinan diri dan kepimpinan.
3. Menanam semangat kesedaran sivik, ketaatan dan cintakan negara serta penjagaan alam sekitar.
4. Mempertingkatkan ketahanan fizikal, mental dan daya kerohanian yang seimbang

References:

1. Malaysian Civil Defence Force (2010). Buku panduan pengurusan kor SISPA. Shah Alam: Pusat Penerbitan Universiti (UPENA), UiTM.

MPU2472 SPORTS MANAGEMENT 1

This course is one of the co-curriculum modules offered to develop well-rounded individuals through involvement in social and community activities. Specifically, it aims to provide students with adequate information and understanding on the implementation and rules in sports management. This course also explores various aspects of sports management namely scope, basic principles, technique and current issues pertaining to sport management.

Learning Outcomes:

Upon completion of this course students should be able to

1. Prepare document in order to organize competition.
2. Apply knowledge gained by managing competition.
3. Participate and evaluate the benefits of participating in lecture or practical class related to sport, recreation and leisure.

References:

1. Rusell Hoyer, Matthew Nicholson, Aaron Smith, Bob Stewart & Hana Westerbeek (2012). *Sport Management and Application 3rd edition*. Routledge Taylor & Francis.
2. Milena Parent & Sharon Smith-Swan (2012). *Managing Major Sport Events Theory & Practise*. Routledge Taylor & Francis Group.

MPU2482 PERSONAL FINANCIAL MANAGEMENT 1

This course is to educate students on personal financial education. It is to open their minds to things that they should be prepared for financially when they enter the competitive job market. The course explains what they should start doing early in their life to achieve their financial dreams.

Learning Outcomes:

Upon completion of this course students should be able to:

1. Apply the concept of financial planning, building financial wealth and avoiding financial troubles.
2. Organise financial planning events at campus level.
3. Examine the program implementation of the organized programme.

References:

1. AKPK (2011). *Power!* Kuala Lumpur : Agensi Kaunseling dan Pengurusan Kredit
2. AKPK (2010). *Money Sense: Getting Smart with Your Money*. Kuala Lumpur: Agensi Kaunseling dan Pengurusan Kredit.

UNIVERSITY REQUIREMENT

WED 10402 COMPETENCY ENGLISH

WED 20202 COMMUNICATION ENGLISH 1

WED 20302 COMMUNICATION ENGLISH 2

WMD10101 MANDARIN 1

WMD10201 MANDARIN 2

WID41009 INDUSTRIAL TRAINING

WED 10402 COMPETENCY ENGLISH

This course focuses on both receptive (reading) and productive (speaking & writing) skills as well grammar skills. It serves to enhance and strengthen students' proficiency in English. Assessments will be task-based where stimulating exercises and group activities will be employed to motivate students to use the language confidently in various situations.

Learning Outcomes:

Upon completion of this course students should be able to:

1. Apply correct grammatical components in written form.
2. Express themselves effectively using appropriate language skills through discussion and presentation.
3. Analyse linear and non-linear comprehension texts using appropriate reading skills
4. Produce written work using correct writing techniques.

References:

1. Choo, W., Nyanaprakasan, S., Yee, S., & Yeoh, W. (2014). *Ace ahead MUET (5th ed)*. Shah Alam, Selangor: Oxford Fajar.
2. Kaur, H. & Jonas, F. (2013). *Effective practice MUET*. Shah Alam, Selangor: Oxford Fajar.
3. Kaur, N., Subramaniam, H. & Subramaniam, A. (2013). *Score in MUET*. Shah Alam, Selangor: Oxford Fajar.
4. Koh, S. (2011). *Effective text MUET*. Subang Jaya, Selangor: Penerbit Ilmu Bakti.

WED 20202 COMMUNICATION ENGLISH 1

This module is to enhance students' acquisition of English through language enrichment activities. The module enables students to enhance their English language proficiency through written work and oral communication. Students also engage in exploring and responding to ideas through group discussion and conducting a project. Students are then exposed to the fundamentals of presentation skills.

Learning Outcomes:

Upon completion of this course students should be able to:

1. Apply correct grammatical skills in written form.
2. Produce professional business correspondence documents.
3. Organize an event through conducting a group discussion, writing a proposal, presenting and executing the event

References:

1. Gamble, T. K. and Gamble, M. (2012). *Communication Works*. 11th edition. McGraw-Hill.
2. Abdul Rahim Salam & Zairus Norsiah Azahar. (2008). *English communication for learners in engineering (2nd ed)*. Kuala Lumpur, Malaysia: Prentice Hall.
3. Guffey, M. E. & Loewy, D. (2013). *Essentials of business communication*. Mason, Ohio: South-Western Cengage Learning.

WED 20302 COMMUNICATION ENGLISH 2

Students are exposed to fundamentals writing skills that focus on academic writing. They are also exposed to language structures. In the second part of the course, students are guided the undertake academic writing assignment with consultation and previous writing assignment. In the last part of the course, students need to present based on the academic writing assignment using the learnt presentation skills.

Learning Outcomes:

Upon completion of this course students should be able to:

1. Use appropriate mechanics in writing effectively.
2. Produce essay using mechanics writing techniques.
3. Prepare academic report by incorporating relevant academic resources.
4. Present information using effective presentation techniques.

References:

1. Rentz, K. & Lentz, P. (2014). *Lesikar's business communication: Connecting in a digital world*. McGraw-Hill Companies.
2. Howard, R. M. (2014). *Writing matters: A handbook for writing and research*. New York: McGraw-Hill.
3. Nor Ainun Zakaria, Aishah Muslim, Mazlin Mohamad Mokhtar, Prapagaran B. K. (2013). *Polytechnic series: Communicative English 3*. Shah Alam, Selangor: Oxford Fajar

WMD10101 MANDARIN 1

This course introduces the basic grammatical structures of Chinese sentences to acquire the basic oral and written communication skills. The contents of this course are Chinese writing system (including Pinyin), numbers, useful Chinese expressions to greet others, to introduce oneself and family members, date time, food and beverages.

Learning Outcomes:

Upon completion of this course students should be able to:

1. Use words, phrases and sentences in Pinyin system and/ or Chinese characters.
2. Practise basic Chinese language for daily communication within the limits of vocabularies and sentence structures acquired in the course.
3. Perform learned Chinese vocabularies, phrases or short sentences in limited contexts

References:

1. Loi Hing Kee, Tan Hua An (2017). *Learn Mandarin 1*. Petaling Jaya: Cengage Learning Asia Pte Ltd.
2. Lai Siew Yoon, Tan Hua An, Tay Yang Lian. (2013). *Speak Chinese, An Introductory Course to the Chinese Language*. Petaling Jaya: Cengage Learning Asia Pte Ltd.
3. Lai Siew Yoon, Lim Yoke Len. (2010). *Shenghuo Huayu, An Introductory Course to the Chinese Language*. Singapore: Cengage Learning Asia Pte Ltd.

WMD10201 MANDARIN 2

This course introduces the basic grammatical structures of Chinese sentences in order to acquire the basic oral and written communication skills. The contents of this course are useful expressions in Mandarin to activities in university, hobby and interest, shopping and purchases, locations, direction, seeing a doctor and holiday activities.

Learning Outcomes:

Upon completion of this course students should be able to:

1. Use Chinese words, phrases, short sentences about learned topics.
2. Practice Chinese language for daily communication within the limits of vocabularies and sentence structures acquired in the course.
3. Perform learned Chinese vocabularies

References:

1. Lai Siew Yoon, Tan Hua An, Tay Yang Lian (2013). *Speak Chinese, An Introductory Course to the Chinese Language*. Petaling Jaya: Cengage Learning.
2. Lai Siew Yoon, Lim Yoke Len. (2010). *Shenghuo Huayu, An Introductory Course to the Chinese Language*. Singapore: Cengage Learning Asia Pte Ltd.
3. Yamin Ma, Xinying Li. (2007). *Easy Steps to Chinese*. Beijing:Beijing Language & Culture University Press. Available from: <http://www.yes-chinese.com/zh-cn/course/view.html?id=3681>
4. Zhongwei Wu. (2010). *Contemporary Chinese*. Beijing: Sinolingua. Available from: <http://www.yes-chinese.com/en/course/view.html?id=3691>

WID41009 INDUSTRIAL TRAINING

This course exposes students to real industrial environment and gives them the opportunity to practice the knowledge and skills they have acquired during their academic years.

Learning Outcomes:

Upon completion of this course students should be able to:

1. Demonstrate the right work manner and attitude with deliberation on safety and health in a working environment.
2. Perform tasks with minimum supervision and meet the company's expectations.
3. Apply technical knowledge, analytical and problem-solving skills to accomplish task assigned by the company.
4. Report effectively on work experience during attachment, including knowledge and skills acquired, in oral and written form.

COMMON CORE

WBD10102 INTRODUCTION TO ENTERPRENEURSHIP

WQD10103 TECHNICAL MATHEMATICS 1

WQD10203 TECHNICAL MATHEMATICS 2

CLD21102 STATISTICS

CLD10003 GENERAL CHEMISTRY

CLD10803 ORGANIC ANALYTICAL CHEMISTRY

CLD20002 OCCUPATIONAL SAFETY AND HEALTH

CLD20402 TRANSPORT PROCESS

WBD10102 INTRODUCTION TO ENTREPRENEURSHIP

This course aims to prepare students with the main characteristics of an entrepreneur and provide basic knowledge and skills in establishing a small venture.

Learning Outcomes:

Upon completion of this course students should be able to:

1. Describe entrepreneurship value and culture
2. Demonstrate the ability to assess business environment
3. Identify entrepreneurship opportunity and explain the process in starting up a business
4. Develop a business idea and participate in entrepreneurship activities

References:

1. Azahari Jamaludin, Abd Razak Mohd Yusoff, Mohd Hazli Mohd Rusli, Salwah Che Mat & Zawiah Abdul Majid (2011). Introduction to entrepreneurship. Oxford Fajar
2. Donald F. Kuratko (2009). *Entrepreneurship: Theory, process, practice 8th Edition*. South Western Cengage Learning.
3. Azahari Jamaludin, Abd Razak Mohd Yusoff, Mohd Hazli Mohd Rusli, Hamidon Katan, Jimisiah Jaafar, Mohd Fauzi Zainol Abidin, Mohd Radzi Zainuddin, Rosnizza Ramlan, Salwah Che Mat & Zawiah Abdul Majid (2012). *Technopreneurship*. Kuala Lumpur: Oxford Fajar

WQD10103 TECHNICAL MATHEMATICS 1

This course covers general mathematics components involving algebra, trigonometry and complex numbers. It emphasizes on developing students' competencies to prepare them for higher level Mathematics. The main method of delivery combines lecture, tutorial and drilling activities to generate students' interest,

Learning Outcomes:

Upon completion of this course students should be able to:

1. Solve operations and problems related to algebra.
2. Apply trigonometric functions in solving triangular problems.
3. Solve complex number operations in several forms.

References:

1. Mathematics Central Committee Universiti Kuala Lumpur. 2012. Technical Mathematics 1 Workbook (Modules Prepared by MCC UniKL). Pearson Custom Publishing: Singapore.
2. Stroud, K. & Booth, D. 2013. Engineering Mathematics (7th Edn). Palgrave Macmillan: UK.
3. Bird, J. 2014. Engineering Mathematics (7th Edn). Routledge: Oxford.
4. Peterson, J. 2012. Technical Mathematics (4th Edn). Delmar Cengage Learning: New York.

WQD10203 TECHNICAL MATHEMATICS 2

This course will cover intermediate level of mathematics involving trigonometry, functions, limits, differentiation and integration. It emphasizes on developing students' mathematical competencies in calculus to prepare them for higher level of mathematics for their science and engineering technology courses.

Learning Outcomes:

Upon completion of this course students should be able to:

1. Solve trigonometric equations.
2. Solve operations and problems related to functions.
3. Apply differentiation and integration techniques to solve practical problems.

References:

1. Mathematics Central Committee Universiti Kuala Lumpur. 2012. Technical Mathematics 2 Workbook (Modules Prepared by MCC UniKL). Pearson Custom Publishing: Singapore.
2. Stroud, K. & Booth, D. 2013. Engineering Mathematics (7th Edn). Palgrave Macmillan: UK.
3. Bird, J. 2014. Engineering Mathematics (7th Edn). Routledge: Oxford.
4. Peterson, J. 2012. Technical Mathematics (4th Edn). Delmar Cengage Learning: New York.

CLD 21102 STATISTICS

This course is aimed at introducing students to basic language of statistics and to apply statistical concepts in engineering. Students will be exposed to selecting, computing and interpreting basic statistical tools.

Learning Outcomes:

Upon completion of this course students should be able to:

1. Illustrate and explain a descriptive and inferential statistics for interpreting results.
2. Apply appropriate statistical models or methods to solve statistical problems
3. Interpret the outcome from statistical software output with the statistical concept

References:

1. Mann P.S, (2004), Introductory to Statistics, Fifth Edition, John Wiley & Sons
2. William Mendenhall, Robert J. B, & Barbara M. B (2002). A brief introduction to probability and statistics. Duxbury/ Thomson Learning.
3. Larry J. S. (2006). *Beginning Statistics*, Second Edition. Mc Graw Hill.
4. Montgomery, D.C. & Runger, G.C. (2003). *Applied Statistics and Probability for Engineers*, Third Edition, John Wiley & Son, International Edition.

CLD10003 GENERAL CHEMISTRY

General Chemistry provides fundamental knowledge in chemistry. This course will equip students with essential knowledge that will enable them to be used and applied in chemical engineering technology and any related application. Students will also be exposed to basic laboratory skills including tools, chemicals, techniques and safety awareness.

Learning Outcomes:

Upon completion of this course students should be able to:

1. Apply knowledge on solving problems related to basic principles of chemistry. (C3)
2. Handle chemicals and apparatus correctly and properly in the application of basic principles of chemistry during laboratory sessions. (P3)
3. Perform effectively as a team member in applying good laboratory techniques (A3)

References:

1. Chang, R (2013), Chemistry, 11th ed., McGraw Hill
2. Zumdahl. S.S, Zumdahl, S.A. (2013), Chemistry, 9TH ed. Cengage Learning
3. John McMurry, Robert C. Fay, (2011), Chemistry, 6th ed, Prentice Hall.
4. Ebbing, D., (2012), General Chemistry, 10th ed., Houghton 4. Barrows.
5. Wentworth.R, Munk. H. B. (2012), Experiments in General Chemistry, Lab Manual, 10th ed,

CLD10803 ORGANIC ANALYTICAL CHEMISTRY

This course provided students with the basic concepts in organic chemistry as well as the analytical techniques used in the field of chemistry.

Learning Outcomes:

Upon completion of this course students should be able to:

1. Apply the phenomena, basic concepts, laws and principles in organic and analytical chemistry.
2. Perform laboratory works related to reaction of organic compound.
3. Assist affectively as a team member in performing good laboratory technique

References:

1. Carey, F.A., Organic Chemistry, 7th Edition, McGraw-Hill (2008) Solomon, T.W. G., Organic Chemistry, 8th Edition, Wiley. (2008)
2. Skoog, D.A., West, D.M., and Holler, F.J., (1997), Fundamentals of Analytical Chemistry, 8th Edition, Saunders College Publishing.
3. Jag, M., (2004), Organic Analytical Chemistry: Theory and Practice, Alpha Science International. Jag, M., Organic Spectroscopy: Principles and Applications, Alpha Science International, Ltd.

CLD20002 OCCUPATIONAL SAFETY AND HEALTH

This course will impart knowledge and create an awareness to occupational safety and health. Students will be exposed to the design, techniques, legal, society and cultural issues in making the workplace as safe as possible.

Learning Outcomes:

Upon completion of this course students should be able to:

1. Illustrate the ability to recognize the types of Hazards, the appropriate Control Measures and risks associated with it, in accordance to Occupational Safety & Health Act (1994) or ACT 154 towards Safety and Health Issues at Workplace (C3, PLO6).
2. Collaborate with Team Members in carrying out activities related to Occupational Safety and Health(P2, PLO9)
3. Demonstrate business practices and opportunities as well as technopreneurial competencies to all work activities related to Occupational Safety And Health

References

1. Crowl, D. A., and Louvar, J. F, *Chemical Process Safety Fundamentals with Applications*, Prentice Hall [TP 150.S24 C76 2002]
2. Goetsch, D. L.,(2002),*Occupational Safety and Health For Technologies, Engineers and Managers*, Prentice Hall.
3. Roy E. S., (1999), *Chemical Process Safety: Learning From Case Histories*, Butterworth-Heinemann
4. Di Pilla. S.,(2003), *Slip & Fall Prevention, a Practical Handbook*, Lewis Publishers

CLD20402 TRANSPORT PROCESS

This course will provide students with the knowledge of heat and mass transfer which will be useful for their study in later years.

Learning Outcomes:

Upon completion of this course students should be able to:

1. Explain knowledge of three modes of heat transfer which are conduction, convection and radiation
2. Apply basic calculation in solving problems related to heat transfer
3. Perform laboratory works safely according to the related operating manual

References:

1. Yunus A. Çengel, (2004), *Heat Transfer: A Practical Approach*, 2nd Edition. McGraw-Hill, USA
2. Geankoplis, (2003), *Transport Processes and Separation Proces Principles*, 4th Edition. Prentice Hall
3. Holman, J.P. (2002), *Heat Transfer*, 9th Edition. McGraw Hill

DISCIPLINE CORE

CLD10703 ENGINEERING DRAWING AND COMPUTING
CLD10502 PRINCIPLES OF CHEMICAL PROCESS
CLD10603 FLUID MECHANICS
CLD20102 ELECTRICAL TECHNOLOGY
CLD20202 PROCESS INSTRUMENTATION
CLD20302 THERMODYNAMICS
CLD20502 BASIC ENGINEERING WORKSHOP
CKD20002 REACTOR TECHNOLOGY
CKD20102 SEPARATION TECHNOLOGY
CPD39806 FINAL YEAR PROJECT

CLD10703 ENGINEERING DRAWING AND COMPUTING

This introductory course aimed at providing students with the basic concepts of computer applications used in the current practice and its application in chemical engineering technology. This course will equip students with concepts and knowledge that are essential to encounter any related problems that need to be solved using a computer application including using computer for engineering design.

Learning Outcomes:

Upon completion of this course students should be able to:

1. Apply theoretical knowledge of computing application in current practice and its application in chemical engineering technology.
2. Reproduce 2D models using basic symbols used in computing and engineering drawing.
3. Construct a piping and instrumentation diagram by using CAD software.

References:

1. Shelly, G. B., Quasney, J. J., Freund S. M. & Enger, R. E. (2011). Ms. Excel 2010: Complete.
2. Bruce A. Finlayson. (2014). Introduction to Chemical Engineering Computing. 2nd ed
3. Ván Darío Gil Chaves, Javier Ricardo Guevara López, José Luis García Zapata, Alexander Leguizamón Robayo, Gerardo Rodríguez Niño. (2016). Process Analysis and Simulation in Chemical Engineering. 1st ed

CLD10502 PRINCIPLES OF CHEMICAL PROCESS

This is an introductory course aimed at providing students with the fundamental concepts of chemical process which form the foundation for their study in later years. These concepts are essential in preparing students to formulate and solve material and energy balances on chemical process systems.

Learning Outcomes:

Upon completion of this course students should be able to:

1. Identify the dimension of an equation and unit conversion
2. Apply the concept of material balances and energy balances in chemical process plants
3. Solve material balances and energy balances to account for the flows to and from the process and its units.

References:

1. Felder & Rousseau (2000), *Elementary of Chemical Process*, 3rd Edition, John Wiley
2. Himmeblau. D.M. (1996), *Basic Principle and Calculation In Chemical Engineering*, 6th Edition, Prentice Hall
3. Regina (2007), *Introduction to Chemical Processes: Principles, Analysis, Synthesis*, Mc Graw Hill International Edition

CLD10603 FLUID MECHANICS

This course is an introduction to fluid mechanics and emphasizes fundamental concepts and problem-solving techniques. Topics to be covered include fluid properties, pressure, fluid static's, control volume analysis and internal flow (flow in pipes and conduits). Students will be familiarized with the equipment involved in fluid flow. The student will also be able to evaluate basic concepts in selecting and analyzing components of fluid systems

Learning Outcomes:

Upon completion of this course students should be able to:

1. Assess the basic theory of fluid in solving problems related fluid static and dynamic (C3, PLO1)
2. Discuss the concepts of static and dynamic fluid and its application in fluid system (C2, PLO2)
3. Conduct laboratory experiments related to fluid static and dynamic by following standard operating procedure and safety awareness

References:

1. Cengel, Y.A. and Cimbala, J.A. (2006). Fluid Mechanics. Boston: Mc Graw Hill
2. Munson B.R., Young D.F., Okiishi T.H., (2006). Fundamentals of Fluid. (5nd Ed). New Jersey: J. Wiley & Sons. [TA357.M86 2006]
3. McCabe and Smith. (2005). Unit Operations of Chemical Engineering. (7th Ed). Boston: McGraw-Hill
4. John F. Douglas (2001). Fluid Mechanics. 4th Edition, Prentice Hall

CLD20102 ELECTRICAL TECHNOLOGY

This is an introductory course aimed at providing students with the fundamentals concept and knowledge of electrical technology. This course will provide students with skills and understanding to operate electrical tools and machines safely and effectively.

Learning Outcomes:

Upon completion of this course students should be able to:

1. Describe basic principles and practices from electrical fundamental disciplines to solve electrical problems.
2. Perform experiments and project according to the standard operating procedure given.
3. Apply basic principles of electricity, circuit theorems, electrical system, magnetism, and electrical machinery.

References

1. Edward Hughes (2012) "Electrical Technology", 11th. Edition, Prentice Hall
2. Floyd (2006), "Principles of Electric Circuits", 8th Edition, Prentice Hall
3. Theodore Wildi (2002), "Electrical Machines, Drive, and Power Systems", 5th. Edition, Prentice Hall
4. Charles K. Alexander and Matthew N.O. Sadiku (2007), "Fundamental of Electric Circuit", 3rd Edition, McGraw-Hill

CLD20202 PROCESS INSTRUMENTATION

This course will impart knowledge and application of process instrumentation. Students will be exposed to the principle and application including the maintenance, troubleshooting and safety aspects of process instrumentation.

Learning Outcomes:

Upon completion of this course students should be able to:

1. Explain the working principle, maintenance and troubleshooting procedures of the measurement devices.
2. Relate the application of instruments in the real plant/factory.
3. Display the ability to conduct the experiment by following standard operating procedure and safety awareness

References:

1. Doebelin, E.O., (1990), *Measurement System; Application and Design*, Fourth Edition, McGraw Hill International Editions
2. Perry, R.H & Green, D., (1994), *Perry's Chemical Engineer's Handbook*, Six Edition, McGraw Hill International Editions

CLD20302 THERMODYNAMICS

This is an introductory course aimed at providing students with the fundamental concepts in thermodynamics. These concepts are essential since the students will apply this knowledge in other engineering courses.

Learning Outcomes:

Upon completion of this course students should be able to:

1. Identify the thermodynamics properties of pure substances using properties table
2. Describe the applications of thermodynamics
3. Relate the closed and open system in the First Law and Second Law of thermodynamics.

References:

1. Cengel, Yunus A., Boles, Michael A. (2006) *Thermodynamics: An Engineering Approach*, 5th edition, McGraw-Hill.
2. Sonntag, Richard E., Borgnakke, Claus. (2001) *Introduction to Engineering Thermodynamics*, John Wiley & Sons

CLD20502 BASIC ENGINEERING WORKSHOP

This is an introductory course aimed at providing students with the basic mechanical engineering workshop practice. Students will be familiarized with basic principles and practical of hand tools in basic engineering workshop. The student also will be able to perform basic machining operation and basic welding operation

Learning Outcomes:

Upon completion of this course students should be able to:

1. Differentiate various tools, equipment and safety awareness in metal fabrication, machining and welding activities.
2. Perform metal fabrication, machining and welding process by using suitable tools and equipment.
3. Work effectively in a team either as a leader or team member.

References:

1. Rao, P. N. (2007) *Manufacturing Technology, Foundry, Forming and Welding*, 2nd Edition, Tata McGraw-Hill
2. Jeffus, L.F. (1997), *Welding: Principles and Application*, 4th ed, Delmar Pub
3. Frisch, D. & Frisch, S. (1998), *Metal: Design and fabrication*, Whitner Library of Design
4. Cary, H.B. (1997). *Modern Welding Technology*, Prentice Hall

CKD20003 REACTOR TECHNOLOGY

This course will impart knowledge of chemical reaction. Students will be exposed to chemical kinetics, different reactor operations, catalysis and catalytic reaction.

Learning Outcomes:

Upon completion of this course students should be able to:

1. Describe the concept of chemical kinetics and the importance of catalyst in chemical reaction
2. Solve problems related to chemical reaction and reactor design based on the concept of chemical kinetics
3. Conduct experiments on chemical reactors safely based on procedures

References:

1. Fogler H.S., (1992), *Elements of Chemical Reaction Engineering*, Third Edition. Prentice-Hall International Series
2. Holland C.D., (1989), *Fundamental of Chemical Reaction Engineering*, Prentice Hall Englewood Cliffs
3. Smith, J. M. (1986), *Chemical Engineering Kinetics*, Third Edition, Singapore, McGraw-Hill International
4. Hill, C. G. (1990), *Chemical Engineering Kinetics & Reactor Design* by New York, John Wiley & Sons

CKD20103 SEPARATION TECHNOLOGY

This course will provide students with the basic principle and operations of separation in chemical engineering technology and expose students to separation technology equipment.

Learning Outcomes:

Upon completion of this course students should be able to:

1. Explain the basic principles and operations in chemical and mechanical separation
2. Apply the fundamental knowledge in separation technology process
3. Perform laboratory experiments safely

References:

1. Geankoplis, C.J. (2003). *Transport Processes And Separation Process Principles*, 4th Edition, Prentice Hall
2. Coulson & Richardson (1983). *Chemical Engineering, Vol.2*, Pergamon Press, Oxford
3. Wankat, P.C. (1988). *Equilibrium Stage Separations*, Elsevier, New York
4. Treybal, R.E. (1981). *Mass Transfer Operations*, 3rd Ed., McGraw-Hill

CPD39806 FINAL YEAR PROJECT

This course introduces students with ability and skills in conducting a technical project based on their specialization area. It provides students with technical writing and presentation skills.

Learning Outcomes:

Upon completion of this course students should be able to:

1. Plan the project activities to fulfil the proposed research problem.
2. Manage and execute the project plan to accomplish project objectives.
3. Analyse project results using appropriate technique or tools.
4. Produce a project report in accordance with the specified standard format.
5. Present and defend the project outcomes effectively.

DIPLOMA IN CHEMICAL ENGINEERING TECHNOLOGY (FOOD)

R/524/4/0038 / MQA A10857

PROGRAMME OVERVIEW

This programme introduces the field of food science and technology, the sciences used to provide knowledge for food technology and the importance of food in providing proper nutrition. It also provides students with theoretical and practical, hands-on skills in nutrition, food chemistry, food microbiology, analysis of food, instruments used for food sample analysis, food packaging, food preservation, toxicology and post harvested technology in food. The students may study more fundamental phenomena that are directly linked to the production of particular food products and its properties. The study of food science and technology emphasizes on the composition of foods and the changes that occur when they are subjected to food processing. Functional foods are foods that promote health beyond providing basic nutrition. Safety of food is a basic requirement of food quality. "Food safety" implies absence or acceptable and safe levels of contaminants, adulterants, naturally occurring toxins or any other substance that make food injurious to health on an acute or chronic basis. Food quality can be considered as a complex characteristic of food that determines its value or acceptability to consumers. Besides safety, quality attributes include nutritional value; organoleptic properties such as appearance, colour, texture, taste; and functional properties. Examples of the activities of food technologists include the development of new food products, design of processes to produce these foods, choice of packaging materials, shelf-life studies, and sensory evaluation of the product with trained expert panels or potential consumers as well as microbiological and chemical testing.

CAREER PATH

Our graduates have unlimited opportunities in getting jobs either in public or private sectors. In public sectors they may work at food related government bodies like Department of Health, Educational institutions, MARDI, SIRIM, MPOB, and others. They may join various industries like cereal manufacturing, bakery products, sugar refinery, manufacturing of flour-based sweetening agent, chocolate and confectionary products, fruits and vegetable products canning industry, edible oils and its products and beverages. The scopes of career may vary from productions supervisors, quality assurance supervisors, technicians, assistant chemist, R&D assistants, operators and others.

COURSES

Diploma in Chemical Engineering Technology (Food)

CFD20103 FOOD PROCESSING TECHNOLOGY

CFD20203 FOOD MICROBIOLOGY

CFD20302 FOOD CHEMISTRY

CFD20403 FOOD QUALITY AND SANITATION

CFD30003 FOOD ANALYSIS

CFD30103 FOOD PACKAGING

CFD30303 SENSORY EVALUATION OF FOOD

CFD20103 FOOD PROCESSING TECHNOLOGY

To impart knowledge and technical skills in processing and preservation technology of various food products.

Learning Outcomes:

Upon completion of this course students should be able to:

1. Explain the principle of food processing and preservation techniques applied at low, ambient or high temperature and the effect of processing techniques towards food products/ingredient.
2. Demonstrate the working principle of food processing equipment/machinery and the ability of handling and troubleshooting of the equipment/machinery.
3. Work with team members in planning, performing and reporting a scientific inquiry, practical or assignment related to new innovative food product and food processing technology.

References

1. Gould, W.A. (2013). Fundamentals of Food Processing and Technology Elsevier
2. Swarup, A. and Shrivastava, P. (2013). Techniques of Food Preservation. Discovery Publishing House
3. Gayen, S. (2013). Food Preservation with an Attitude: Guide to preserve food. Lap Lambert Academic Publishing GmbH KG

CFD20203 FOOD MICROBIOLOGY

This course aimed to provide the students with understanding of the basic function, activity, classification of microorganisms, microbiological quality of food products and food safety. The student will also obtain a good understanding of laboratory practices in food microbiology.

Learning Outcomes:

Upon completion of this course students should be able to:

1. Apply theories and concepts of microorganisms and their factors that influence microbial growth in food applications, food spoilage, food intoxication and food infection.
2. Organize important technique and analysis in food microbiology.
3. Perform a scientific inquiry on food microbiology with team members.

References:

1. Ray, B. and Bhunia A. (2013). *Fundamental Food Microbiology*, 5th edition, CRC Press.
2. Thomas J. Montville, Karl R. Matthew (2012), *Food Microbiology: An Introduction*, ASM Press.
3. Garg N. and Garg K.L. (2010). *Laboratory Manual of Food Microbiology*, I K International Publishing House Pvt. Ltd
4. Adams M.R and Moss M.O. (2008). *Food Microbiology*, 3rd edition, Royal Society of Chemistry
5. Jeffrey L. Kornacki (2010). *Principles of Microbiological Troubleshooting In the Industrial Food Processing Environment*, Springer

CFD20302 FOOD CHEMISTRY

This course aimed to provide the students with understanding of the fundamental concept of chemical properties and reactions in food.

Learning Outcomes:

Upon completion of this course students should be able to:

1. Explain the structure, properties and functions of major food constituents such as water, carbohydrates, lipids, proteins, enzymes, vitamins, mineral, pigments and other food additives.
2. Compute scientific inquiry/assignment related to food chemistry.
3. Explain selected topics in food chemistry.

References:

1. Brady, John W. Introductory food chemistry. Comstock Pub. Associates, 2013.
2. Simpson, Benjamin K., et al. Food biochemistry and food processing. John Wiley & Sons, 2012.
3. Whitney, Eleanor, and Sharon Rady Rolfes. Understanding nutrition. Cengage Learning, 2012.
4. Damodaran, Srinivasan, Kirk Parkin, and Owen R. Fennema (eds.). (2008). Fennema's Food Chemistry, 4th edition. Boca Raton: CRC Press/Taylor & Francis.
5. Newton, David E. (2007). Food Chemistry. New York: Facts on File.
6. Belitz, H.-D., W. Grosch, and Peter Schieberle. (2004). Food Chemistry, 3rd edition. Berlin: Springer

CFD20403 FOOD QUALITY AND SANITATION

To provide students with knowledge of the importance of quality assurance and quality control in food industries, basic quality problems of food products, and knowledge of various quality management system that commonly applied in food industries and to provide students with knowledge on the principles and application of food hygiene in food manufacturing.

Learning Outcomes:

Upon completion of this course students should be able to:

1. Describe the principles, practices and basic quality problems of food products in food industry.
2. Analyze and select the suitable monitoring and control of a process to ensure that it operates at its full potential to produce conforming product based from statistical methods.
3. Explain the principles and applications of food hygiene in food manufacturing, food laws and legislation in sanitation and give presentation in class

References:

1. Medina, D. A. and Laine, A.M. Food Quality: Control, Analysis and Consumer Concerns. Nova Science Publishers. 2011
2. Mark, C. Food Industry Quality Control Systems. CRC Press, 2009
3. Mortimore, S. & Wallace, C. *HACCP: A Practical Approach*, Kluwer Springer Science and Business Media, 2013
4. Hubbard, M. Statistical Quality Control for Food Industry. Springer. 2013
5. Andres, J.V. *Quality Assurance for the Food Industries - A Practical Approach*, CRC Press, 2004.

CFD30003 FOOD ANALYSIS

This course will provide the principles of chemical and instrumental analysis of food and provide laboratory experience for students.

Learning Outcomes:

Upon completion of this course students should be able to:

1. Applying the principles and procedure of chemical, physical and instrumental analysis for the purpose of laboratory analysis of food.
2. Use the knowledge of the course in doing food sampling and food analysis
3. Collaborate with team members in planning, performing and reporting a scientific inquiry/assignment related to food analysis

References:

1. Nollet. L.M.L, (2015) Handbook of Food Analysis, 3rd edition. CRC Press., New York, NY
2. Nielsen. S.S, (2011) Food Analysis, 4th edition. Springer Publishers., New York, NY
3. American Association of Cereal (AACC). (1995). Approved Methods of Analysis, 9th ed. St Paul, MN
4. James, C. S. (1999). Analytical Chemistry of Food. Chapman & Hall
5. Skoog, D.A and West,D.M. (1998). Fundamental of Analytical Chemistry, 4th ed. Holt, Saunders, New York
6. Willard, H.H., Merit, L.L., Dean, J.A., Settle, F.A. (1998). Instrumental Methods of Analysis, 7th ed. Wadsworth Publishing, Belmont, CA
7. Pomeranz and Meloan, (1994). Food Analysis: Theory and Practice. 3rd. ed

CFD30103 FOOD PACKAGING

To provide students with the principles of food packaging and application of packaging materials in food industry as well as packaging regulation and labelling requirement to be in line with Malaysian Food Act 1983 and Food Regulation 1985.

Learning Outcomes:

Upon completion of this course students should be able to:

1. Explain the function of food packaging and the packaging materials used in food product application.
2. Demonstrate the typical packaging materials testing and some major packaging equipment.
3. Collaborate with team members in reporting the experimental results/assignment given.

References:

1. Robertson, G.L Food Packaging Principle and Practice Third Edition, CRC Press Taylor and Francis Group (2013)
2. Coles, R. McDowell, D. and Kirwan, M.J. Food Packaging Technology, Blackwell Publisher. (2009)
3. Laws of Malaysia: Food Act and Regulations, MDC Publishers Sdn. Bhd. (2015).

CFD30303 SENSORY EVALUATION OF FOOD

To provide students with the basic principles and requirements and sensory evaluation.

Learning Outcomes:

Upon completion of this course students should be able to:

1. Apply the appropriate techniques and methods of sensory evaluation for product development.
2. Conduct and report results of experiment by using appropriate statistical methods to guide product development and assure quality of food.
3. Discuss with team members in planning and performing sensory test as a project.
4. Describe the principle steps in market research

References:

1. Meilgaard, M.C., Carr, B.T. & Civille, G.V. (2015). *Sensory Evaluation Techniques*, Fifth Edition, CRC Press. ISBN-10: 1482216906 ISBN-13: 978-1482216905
2. Stone, H., Bleibaum, R. and Thomas, H.A. (2012). *Sensory Evaluation Practices*, Fourth Edition (Food Science and Technology), Academic Press. ISBN-10: 0123820863 ISBN-13: 978-0123820860
3. Delarue, J., Lawlor, B. and Rogeaux, M. (2015). *Rapid Sensory Profiling Techniques: Applications in New Product Development and Consumer Research*. Woodhead Publishing Series in Food Science, Technology and Nutrition. ISBN-10: 178242248X ISBN-13: 978-1782422488

PROGRAMME STRUCTURE: *(subject to amendments)*

YEAR 1 : SEMESTER 1

NO	COURSE CODE	COURSE	CREDIT	F2F				NON F2F
				L	T	P	0	
1	CLD10703	ENGINEERING DRAWING & COMPUTING	3	15	30	36	9	30
2	MPU2313 / MPU2323	AMALAN ISLAM DI MALAYSIA/ RELIGIOUS PRACTICES IN MALAYSIA	3	17	0	0	34	69
3	WED10402	COMPETENCY ENGLISH	2	14	14	0	5	47
4	WQD10103	TECHNICAL MATHEMATICS 1	3	17	11	47	7	38
5		FOREIGN LANGUAGE 1	1	21	0	0	4	25
		TOTAL	12	84	55	83	59	209

YEAR1 : SEMESTER 2

NO	COURSE CODE	COURSE	CREDIT	F2F				NON F2F	TOTAL SLT
				L	T	P	0		
1	CLD10003	GENERAL CHEMISTRY	3	17	11	47	7	38	120
2	CLD10502	PRINCIPLES OF CHEMICAL PROCESS	2	14	13	17	4	32	80
3	CLD10603	FLUID MECHANICS	3	15	20	36	4	45	120
4	CLD20102	ELECTRICAL TECHNOLOGY	2	14	0	22	5	39	80
5	WED20202	COMMUNICATION ENGLISH 1	2	13	13	0	3	51	80
6	WQD10203	TECHNICAL MATHEMATICS 2	3	34	17	0	6	63	120
7	MPU2232	INTERPERSONAL SKILLS	2	17	0	0	25	78	120
8	MPU24*2	CO-CURRICULUM	2						80
		TOTAL	19	124	74	122	54	346	800

YEAR 2 : SEMESTER 3

NO	COURSE CODE	COURSE	CREDIT	F2F				NON F2F	TOTAL SLT
				L	T	P	0		
1	CLD10803	ORGANIC & ANALYTICAL CHEMISTRY	3	34	0	36	7	43	120
2	CLD20002	OCCUPATIONAL SAFETY AND HEALTH	2	14	12	0	6	48	80
3	CLD20202	PROCESS INSTRUMENTATION	2	14	0	25	4	37	80
4	CLD20302	THERMODYNAMICS	2	14	22	7	6	31	80
5	CLD20402	TRANSPORT PROCESS	2	15	0	33	4	28	80
6	CLD20502	BASIC ENGINEERING WORKSHOP	2	17	0	33	3	27	80
7	MPU2163/ MPU2143	PENGAJIAN MALAYSIA 2 (LOCAL)/ BAHASA MELAYU KOMUNIKASI 1 (INTERNATIONAL)	3	17	0	0	25	78	120
8		FOREIGN LANGUAGE 2	1	21	0	0	4	25	50
		TOTAL	17	146	34	134	59	317	690

YEAR 2 : SEMESTER 4

NO	COURSE CODE	COURSE	CREDIT	F2F				NON F2F	TOTAL SLT
				L	T	P	0		
1	CFD20203	FOOD MICROBIOLOGY	3	28	0	36	6	50	120
2	CFD20302	FOOD CHEMISTRY	2	30	0	12	6	32	80
3	CFD30303	SENSORY EVALUATION OF FOOD	3	30	0	45	6	39	120
4	CKD20003	REACTOR TECHNOLOGY	3	14	11	29	7	59	120
5	CKD20102	SEPARATION TECHNOLOGY	2	12	0	16	5	47	80
6	CLD21002	STATISTICS	2	15	22	0	5	38	80
7	WBD10102	INTRODUCTION TO ENTREPRENEURS	2	17	28	0	6	29	80
8	CFD30003	FOOD ANALYSIS	3	28	0	42	7	43	120
		TOTAL	20	174	61	180	48	337	800

YEAR 3 : SEMESTER 5

NO	COURSE CODE	COURSE	CREDIT	F2F				NON F2F	TOTAL SLT
				L	T	P	O		
1	CFD20403	FOOD QUALITY AND SANITATION	3	38	0	6	8	68	120
2	CFD20103	FOOD PROCESSING TECHNOLOGY	3	28	0	42	7	43	120
3	CFD30103	FOOD PACKAGING	3	34	0	49	4	33	120
4	CPD39806	FINAL YEAR PROJECT	6	5	0	195	1	39	240
		TOTAL	15	105	0	292	20	183	600

YEAR 3 : SEMESTER 6

NO	COURSE CODE	COURSE	CREDIT	F2F				NON F2F	TOTAL SLT
				L	T	P	O		
1	WID41009	INDUSTRIAL TRAINING	9			320	4	36	360
		TOTAL	9	0	0	320	4	36	360

Total Credit to Graduate (TCG): 94

*** Applicable for Malaysian Students**

Students must register and pass subject MPU3213 Bahasa Kebangsaan A before graduation if attain grade D and E in Bahasa Melayu at SPM level and never passed Bahasa Kebangsaan A in their previous programme. Other conditions: refer to your Academic Advisor. Students under this category will graduate with additional of 3 credits on top of TCG.

* Passing mark for all MPU Compulsory subjects is 50 marks (C).

Co-Curriculum Courses

NO	COURSE CODE	COURSE	CREDIT	F2F				NON F2F	TOTAL SLT
				L	T	P	O		
1	MPU2412	CAREER GUIDANCE 1	2	17	0	0	18	45	80
2	MPU2422	COMMUNITY SERVICE 1	2	17	0	0	9	54	80
3	MPU2442	RAKAN MASJID 1	2	17	0	10	1	52	80
4	MPU2452	SISWA-SISWI BOMABA & PENYELAMAT 1	2	17	0	25	0	38	80
5	MPU2462	SISWA-SISWI PERTAHANAN AWAM	2	17	0	16	0	47	80
6	MPU2472	SPORTS MANAGEMENT 1	2	17	0	9	8	46	80
7	MPU2482	PERSONAL FINANCIAL MANAGEMENT 1	2	17	0	18	3	42	80
8	MPU2432	CULTURE 1	2	17	0	23	0	40	80

Academic Calendar 2021

Attachment 1 Main UniKL Academic Calendar 2021/2022

Internal Memo for Academic Calendars 2021/2022

[illegible]

Semester	January sem 2021		July sem 2021		July sem (Sept intake) 2021	
Activity	Dates	Duration (Day/ Wks)	Dates	Duration (Day/ Wks)	Dates	Duration (Day/ Wks)
New Intake Registration	24 Jan 21	1 day	01 Aug 20	1 day	26 Sep 21	1 day
Welcome & Orientation Week	25 29 Jan	5 days	2 6 Aug	5 days	27 Sept 01 Oct	5 days
Lessons	1 Feb 2 Apr	9 wks	9 Aug 24 Sept	7 wks	4 Oct 19 Nov	7 wks
Mid Sem Break	5 9Apr	5 days	27 Sept 01 Oct	5 days	22 26 Nov	5 days
Lessons	12 Apr 4 June	8 wks	4 Oct 10 Dec	10 wks	29 Nov 14 Jan 2022	7 wks
Revision	7 11 June	5 days	11 15 Dec	5 days	15 18 Jan	4 days
Final Exam	14 27 June	14 days	16 31 Dec	14 days	19 21 Jan	3 days
End of Sem Break	28 June 30 July	5 wks	1 Jan 11 Feb 2022	6 wks	22 Jan 11 Feb 2022	3 wks

PROPOSAL TO ADJUST THE REGISTRATION DATE FOR THE MAIN JULY 2021 INTAKE AND THE ARRANGEMENT FOR MULTIPLE REGISTRATION DATES