

## SYARAT KEMASUKAN

### STPM/Matrikulasi/Asasi

Mendapat sekurang-kurangnya **PNGK 3.00**; dan Mendapat sekurang-kurangnya **Gred B-(NGMP 2.67)** pada peringkat STPM/Matrikulasi (Sains atau Teknikal) / Asasi dalam mata pelajaran berikut:

- Matematik/ Matematik T/ Matematik Lanjutan
- Kimia/ Kimia kejuruteraan
- Fizik/ Fizik kejuruteraan

### atau

- Matematik/ Matematik T/Matematik Lanjutan T
- Kimia
- Biology; dan
- Mendapat Sekurang-kurangnya **Gred B / Gred 4B** pada peringkat SPM dalam mata pelajaran Fizik

### Diploma

Memiliki Diploma Sains atau Diploma Kejuruteraan dari Institusi Pendidikan yang diiktiraf oleh Universiti dan Kerajaan Malaysia; dan

Pencapaian minimum bagi Calon Lulusan Diploma hendaklah mendapat **Purata Nilai Gred Kumulatif (PNGK) 3.33**, dan

Calon dikehendaki mengemukakan transkrip akademik dari Semester satu (1) hingga Semester akhir; dan Mendapat sekurang-kurangnya **Gred C / Gred 6C** pada peringkat SPM dalam mata pelajaran berikut:

- Matematik Tambahan
- Fizik / Kimia

### Calon Bukan Warganegara

Memperoleh sekurang-kurangnya **PNGK 3.33** Dalam Diploma Kejuruteraan Yang Diiktiraf Oleh Senat Universiti; atau

Bagi Calon Warganegara Indonesia - Lulus Ujian Akhir Nasional (UAN) dengan memperolehi sekurang-kurangnya **Gred 8.0** atau keputusan akhir Pendidikan Menengah Atas dengan memperolehi sekurang-kurangnya **Gred 8.5** bagi mata pelajaran berikut:

- Matematik
- Fizik
- Kimia

### atau

Memperoleh sekurang-kurangnya **Gred B** dalam A-Level bagi mata pelajaran:

- Matematik
- Fizik
- Kimia

### dan

Mencapai skor 550 dalam *Test of English as a Foreign Language (TOEFL)* atau mencapai 6.0 dalam *International English Language Testing Service (IELTS)*.

## ENTRY REQUIREMENTS

### STPM/Matriculation/Foundation Studies

At least a **CGPA of 3.00**; and obtained at least **Grade B (CGPA 2.67)** at STPM/Matriculation (Science or Technical) / Foundation in the following subjects:

- Mathematics / Mathematics T / Further Mathematics T
- Chemistry / Engineering Chemistry
- Physics / Engineering Physics

### or

- Mathematics/ Mathematics T / Further Mathematics T
- Chemistry
- Biology and
- Obtained at least **Grade B / Grade 4B** at the SPM level in Physics.

### Diploma

Holds a Diploma in Science or Diploma in Engineering from Educational Institutions recognized by the University and the Government of Malaysia and graduated with a minimum of Diploma Candidates must have **CGPA of 3.33**, and

Candidates are required to submit academic transcripts from Semester one (1) to the end of the semester, and obtained at least **Grade C / Grade 6C** in the SPM in the following subjects:

- Additional Mathematics
- Physical / Chemical

### Non-Malaysian Candidate

Obtain a **CGPA of at least 3:33** in Engineering Diploma Accredited by the University Senate;

### or

For Indonesia Citizen Candidate - Passed Final Test (UAN) with at least **Grade 8.0** or Upper Secondary final decision by at least a **Grade 8.5** for the following subjects:

- Mathematics
- Physics
- Chemistry

### or

Obtain at least **Grade B** in A-level for the subject:

- Mathematics
- Physics
- Chemistry
- and

Achieving scores of 550 in *Test of English as a Foreign Language (TOEFL)* or reached 6.0 in *International English Language Testing Service (IELTS)*.



# JABATAN KEJURUTERAAN KIMIA DAN PROSES

FAKULTI KEJURUTERAAN DAN ALAM BINA (FKAB)

Sarjana Muda Kejuruteraan (Kimia)  
Bachelor of Engineering (Chemical)

Sarjana Muda Kejuruteraan (Biokimia)  
Bachelor of Engineering (Biochemical)



## SARJANA MUDA KEJURUTERAAN (KIMIA/BIOKIMIA) BACHELOR OF ENGINEERING (CHEMICAL/BIOCHEMICAL)

### Apa itu kejuruteraan kimia dan kejuruteraan biokimia?:

- Kedua-dua bidang melibatkan pemrosesan bahan mentah kepada bahan berguna.
- **Kejuruteraan kimia** menekankan tindakbalas kimia manakala **kejuruteraan biokimia** berorientasikan tindakbalas biologi.
- Jurutera yang dihasilkan dari kedua-dua program diiktiraf sebagai Jurutera Kimia oleh Lembaga Jurutera Malaysia.

### Kekuatan program kami:

- Program pengajian diiktiraf penuh oleh Lembaga Jurutera Malaysia (BEM) dan setara dengan program kejuruteraan kimia/biokimia di negara-negara ahli Washington Accord. (Amerika Syarikat, Jerman, Jepun, Australia, Singapura dsb).
- 90% kakitangan akademik yang berkelayakan PhD (11 Profesor, 5 Prof Madya, 12 Pensyarah) dan berdaftar dengan badan profesional dalam dan luar negara (BEM, IEM, IChemE-UK).
- Persekitaran pengajaran dan pembelajaran yang kondusif, berkesan dan interaktif dengan nisbah pensyarah kepada pelajar yang kecil (1:10).
- Keterlibatan pihak industri (PETRONAS, Sime Darby, Inno Biologics, Biocon) secara langsung dalam pembangunan kurikulum dan aktiviti pengajaran dan pembelajaran.

### Kenapa pilih kami?:

- Prasarana pengajaran dan pembelajaran terbaik.
- Kaedah pembelajaran sistematik, menyeluruh dan merangkumi elemen kemahiran teknikal dan insaniah.
- Pendedahan langsung terhadap industri melalui aktiviti ceramah dan lawatan.
- Kelab Pelajar Kejuruteraan Kimia (ChESC) menjadi pentas untuk menggilap potensi dan bakat pelajar.
- Pelajar mendapat anugerah dan pengiktirafan pelbagai organisasi (IEM, UEM, EXXON MOBILE, PETRONAS)
- Kejayaan pelajar di peringkat kebangsaan dan antarabangsa dengan memenangi pelbagai hadiah dan anugerah
- Alumni berkhidmat di pelbagai organisasi dalam dan luar negara (Russia, India, Singapura, UAE, Thailand, Sudan, Vietnam, Bangladesh, Indonesia, Jerman).

### Kelebihan program kami:

- **Projek bersepadu** mengintegrasikan kesemua teori dan pengetahuan kejuruteraan dalam satu projek yang memerlukan penyelesaian terbuka.
- Pembangunan inovasi dan pemikiran kreatif melalui aktiviti makmal penyelesaian terbuka (**Open Ended Laboratory-OEL**).
- **Projek rekabentuk loji pemrosesan** merupakan medan latihan sebenar sebagai jurutera kimia/biokimia.
- Kemahiran menjalankan penyelidikan terkini secara saintifik dalam bidang kejuruteraan kimia/biokimia melalui **projek ilmiah**.

### Ke mana selepas ini?:

- Peluang kerjaya sebagai jurutera kimia/biokimia dalam dan luar negara:
  - Petrokimia
  - Oleokimia
  - Industri pembuatan
  - Farmaseutikal
  - Kesihatan dan keselamatan
  - Pengurusan tenaga, alam sekitar dan teknologi hijau
  - Bioteknologi dan pertanian
  - Industri makanan
  - Agensi kerajaan dan GLC
  - Institusi penyelidikan
  - IPTA/IPTS
  - Kewangan dan perundangan
- Peluang pengajian dan latihan lanjutan (Maklumat lanjut sila rujuk brosur Siswazah FKAB, UKM):
  - Sarjana Kejuruteraan (Kejuruteraan Kimia)
  - Sarjana Kejuruteraan (Kejuruteraan Sekitaran)
  - Sarjana Sains
  - Doktor Falsafah
  - Pasca-doktoral



### What is chemical engineering and biochemical engineering?:

- The two areas involve in the processing of raw materials into useful materials.
- The chemical engineering emphasizes chemical reactions whereas; biochemical engineering is biological oriented reactions.
- Engineers graduated from these programs are recognized as Chemical Engineer by the Board of Engineers Malaysia.

### Our program strengths:

- The study programs are accredited by the Board of Engineers Malaysia (BEM) and equivalent to the programs in chemical/biochemical engineering in the countries which are members of Washington Accord (United States, Germany, Japan, Australia, Singapore, etc.).
- 90% of academic staff are PhD qualified (11 Professors, 5 Associate Professors, 12 Lecturers 12) and registered with local and international professional bodies (BEM, IEM, IChemE, UK).
- The teaching and learning environment is conducive, effective and interactive; with small lecturer to student ratio (1:10).
- The direct involvement of the industries (PETRONAS, Sime Darby, Inno Biologics, Biocon) in curriculum development, and teaching and learning activities.

### Why Choose Us?:

- The best teaching and learning infrastructure.
- The systematic and comprehensive learning method which includes elements of technical and soft skills.
- Direct industry exposure through talks and industrial visits.
- Chemical Engineering Student Club (ChESC) is a platform to groom students potential and talents.
- Awards and recognitions to students from various organizations (IEM, UEM, EXXON MOBILE, PETRONAS)
- Winning numerous prizes and awards at national and international student competitions.
- Alumni are employed locally and internationally (Russia, India, Singapore, UAE, Thailand, Sudan, Vietnam, Bangladesh, Indonesia, Germany).

### Our program advantages:

- Integrated project integrates comprehensive theoretical and engineering knowledge that requires an open ended solution.
- Development of innovative and creative thinking through Open-Ended Laboratory (OEL).
- The process plant design project serves as training field for chemical/biochemical engineer to be.
- Ability to conduct cutting-edge research scientifically in chemical/biochemical engineering through research project.

### Where to after this?:

- Career opportunities as a chemical/biochemical engineer local and abroad:
  - Petrochemicals
  - Oleochemicals
  - Manufacturing industry
  - Pharmaceuticals
  - Health and safety
  - Management of energy, environment and green technology
  - Biotechnology and agriculture
  - Food industry
  - Government agencies and GLCs
  - Research institutes
  - Universities/colleges
  - Financial and legal
- Opportunities for postgraduate education and training (Please refer to the Graduate FKAB, UKM brochure):
  - Master of Engineering (Chemical Engineering)
  - Master of Engineering (Environmental Engineering)
  - Master of Science
  - Doctor of Philosophy
  - Post-doctoral

