### Analytical Chemistry B. App. Sc. (Hons.)

**Why study this programme?**

You will be dynamically nurtured, respected and referred as analytical chemists who are socially responsible in supporting the national and global aspirations in science, technology and innovations for a sustainable tomorrow.

**Indicative Core Courses**

- First Year
  - Inorganic Chemistry I
  - General Chemistry Practical I
  - Organic Chemistry I
  - General Chemistry Practical II
  - Analytical Chemistry I

- Second Year
  - Organic Chemistry Practical
  - Organic Chemistry II
  - Physical Chemistry I
  - Inorganic Chemistry II
  - Spectroscopic methods

- Third Year
  - Physical Chemistry II
  - Analytical Chemistry Practical II
  - Separation Methods
  - Electroanalytical Methods

- Fourth Year
  - Chemistry Project or Other Courses from Analytical Chemistry, Industrial Chemistry and Pure Chemistry
  - Physical Chemistry III
  - Environmental Pollution Chemistry

**Course duration**

Four years

**Entry Requirement**

- General requirement: SPM or equivalent with credit in Bahasa Malaysia/Bahasa Malaysia July papers and obtained at least Band 2 in the Malaysian University English Test (MUET)
- STPM: passed with at least CGPA 3.00 and a minimum grade B (CGPA 3.00) in General Studies, Chemistry, Mathematics T/Advanced Mathematics and a minimum grade C (CGPA2.00) in Physics
- Matriculation/Foundation: passed with at least CGPA 3.00 and a minimum grade B (CGPA 3.00) in Chemistry, Mathematics and a minimum grade C (CGPA2.00) in Physics
- Diploma or equivalent: Hold a Diploma with at least CGPA 3.00 from recognized institutions in the related area

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### Industrial Chemistry B. App. Sc. (Hons.)

**Why study this programme?**

You will be nurtured, be referred and respected as industrial chemists who can contribute to the current industrial needs and development of the country in supporting the social, economic and an environmental well-being of the nation.

**Indicative Core Courses**

- First Year
  - Inorganic Chemistry I
  - General Chemistry Practical I
  - Organic Chemistry I
  - General Chemistry Practical II

- Second Year
  - Organic Chemistry II
  - Analytical Chemistry I
  - Materials Chemistry
  - Inorganic Chemistry II
  - Physical Chemistry I
  - Unit Operations

- Third Year
  - Physical Chemistry II
  - Industrial Practical
  - Analytical Chemistry II
  - Analytical Chemistry Practical I
  - Polymer Chemistry
  - Unit Operations Practical I

- Fourth Year
  - Chemistry Project or Other Courses from Analytical Chemistry, Industrial Chemistry and Pure Chemistry
  - Chemical Processing

**Course duration**

Four years

**Entry Requirement**

- General requirement: SPM or equivalent with credit in Bahasa Malaysia/Bahasa Malaysia July papers and obtained at least Band 2 in the Malaysian University English Test (MUET)
- STPM: passed with at least CGPA 3.00 and a minimum grade B (CGPA 3.00) in General Studies, Chemistry, Mathematics T/Advanced Mathematics and a minimum grade C (CGPA2.00) in Physics
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### Pusat Pengajian Sains Kimia

School Of Chemical Sciences
VISION
To realise the aspiration of Universiti Sains Malaysia in Transforming Higher Education for a Sustainable Tomorrow.

MISSION
- To produce chemistry graduates who are knowledgeable, highly skilled, well-mannered and possess excellent work ethics suited for the requirements of the public and industrial sectors.
- To provide chemistry students with quality education.
- To instill awareness among chemistry students towards the welfare of the society.
- To provide modern facilities for chemistry teaching and research.
- To attract excellent students from Malaysia and overseas to study chemistry.

OBJECTIVES
- To provide a broad, balanced and in depth education in chemistry and related areas at the undergraduate level.
- To develop the students into graduates with theoretical and practical knowledges and the ability to apply the knowledge to employment or further studies in chemistry or other related postgraduate programmes.
- To develop students with various skills including practical, social, communicative, leadership and entrepreneurship skills.
- To develop students with the ability to assess and solve problems critically, logically and creatively.

Chemistry B.Sc. (Hons.)

Why study this programme?
You will be dynamically nurtured, respected and referred as chemists who are socially responsible in supporting national and global aspirations in science, technology and innovations for a sustainable tomorrow.

Indicative Core Courses
First Year
- Inorganic Chemistry I
- General Chemistry Practical I
- Organic Chemistry I
- General Chemistry Practical II
Second Year
- Organic Chemistry II
- Analytical Chemistry I
- Inorganic Chemistry Practical
- Inorganic Chemistry II
- Physical Chemistry I
- Organic Chemistry Practical
Third Year
- Inorganic Chemistry III
- Analytical Chemistry II
- Analytical Chemistry Practical I
- Physical Chemistry II
- Physical Chemistry Practical
Fourth Year
- Chemistry Project or Other Courses from Analytical Chemistry, Industrial Chemistry and Pure Chemistry
- Physical Chemistry III
- Inorganic and Analytical Chemistry Practical
- Physical and Organic Chemistry Practical
- Organic Chemistry III

What will this programme mean for my future?
Many opportunities offered by this programme will equip you to confidently and skillfully pursue your chosen career. You might work in the industry, academia, government or non-profit organization as chemical engineer, research scientist, patent lawyer, technical writer, entrepreneur, or auditor. You can also pursue higher study after the first degree in chemistry, allowing you to specialize in the area of interest such as analytical, forensic or materials chemistry, and eventually work in a wide range of other specialised roles.

Course Structure

<table>
<thead>
<tr>
<th>Course Component</th>
<th>Credit Unit Requirement B.Sc. (Hons)</th>
<th>Credit Unit Requirement B.App Sc. (Hons)</th>
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<tr>
<td>Core (T)</td>
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<td>Elective (E) or Elective (E) &amp; Minor (M)</td>
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<td>University (U)</td>
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<tr>
<td>Total</td>
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<td>120</td>
</tr>
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Entry Requirement
- General requirement: SPM or equivalent with credit in Bahasa Malaysia/Bahasa Malaysia July papers and obtained at least Band 2 in the Malaysian University English Test (MUET)
- SPM: passed with at least CGPA 3.00 and a minimum grade B (CGPA 3.00) in General Studies, Chemistry, Biology/Physics, Mathematics A/Advanced Mathematics
- Matriculation/Foundation: passed with at least CGPA 3.00 and a minimum grade B (CGPA 3.00) in Chemistry, Mathematics, Biology/Physics
- Diploma or equivalent: Hold a Diploma with at least CGPA 3.00 from recognized institutions in the related area.

We offer two four-year degree programmes that reflect training across all areas of Chemistry and the current needs of chemistry, industries and society. The Chemistry degree programmes have full accreditation from the Royal Society of Chemistry, UK.

You can choose optional courses from other science and arts programmes as a minor programme. You shall spend time in our laboratories that are equipped with basic and advanced instrumentation facilities. You shall also have the opportunity to embark on an extended lab or industrial or overseas placement that will equip you with valuable skills that are desirable to any workplace such as problem solving, presentation, communication, research, management and leadership. This will empower you to either specialise in a science-related career or branch out to different career horizons, should you choose to.

If you’re inclined towards furthering your study, our Chemistry degrees open up opportunities for a high-level research career.

For more information, please log in to our website at https://chem.usm.my.