

CURRICULUM STRUCTURE - BACHELOR OF CHEMICAL ENGINEERING WITH HONOURS (UR6524001)
ACADEMIC SESSION 2022/2023

| YEAR | FIRST | | SECOND | | THIRD | | FOURTH | | |
|-----------------------------|--|--|---|---|---|---|---|--------------------------------------|------|
| SEMESTER | I | II | III | IV | V | VI | | VII | VIII |
| Engineering Core (91) | KMJ15303 Electrical Technology | KMJ10003 Engineering Skills | KMJ22003 Chemical Eng. Thermodynamics | KMJ22503 Mass Transfer | KMJ32003 Reaction Engineering | KMJ32803 Engineering Economics | KMJ42003 Chemical Plant Design I | KMJ42704 Chemical Plant Design II | |
| | KMJ12303 Introduction to Sustainability | KMJ16803 Introduction to Computer Programming | KMJ22103 Fluid Mechanics | KMJ22703 Biochemical Engineering | KMJ32104 Process Dynamics & Control | KMJ32503 Bioreactor System | KMJ49802 Final Year Project I | KMJ49904 Final Year Project II | |
| | | KMJ12602 Thermodynamics | KMJ22204 Material and Energy Balance | KMJ22403 Heat Transfer | KMJ32203 Separation process | KMJ32603 Safety & Loss Prevention | KMJ42203 Good Manufacturing Practice | KMJ4XXXX Elective 3 | |
| | | KMJ12802 Process Instrumentations | | KMJ22601 Transport Phenomena Application | KMJ32301 Skills in Separation Process | KMJ32702 Simulation for Chemical Engineering | KMJ42303 Industrial Waste Treatment | | |
| | | | | | | KMJ3XXXX Elective 1 | KMJ4XXXX Elective 2 | | |
| Non Engineering (28) | SMQ10103 Engineering Mathematics I | SMQ10203 Engineering Mathematics II | SMQ20303 Engineering Mathematics III | SMQ27103 Engineering Statistics | KMJ42403 Engineering Management | KMJ45802 Professional Engineers | | | |
| | KMJ12102 Organic Chemistry I | KMJ12702 Organic Chemistry II | KMJ22303 Analytical Chemistry | | | | | | |
| | KMJ12203 Introduction to Biological and Chemical Science Principles | KMJ12501 Biochemical Science | | | | | | | |
| University Required (16) | SMB41002 University Malay Language | SMB20102** English For General Communication | | SMB31202 English For Technical Communication | SMUXXXX*** Option Subjects | SMU22402 Engineering Entrepreneurship | | | |
| | SMB10102* Preparatory English | | SMU13002 Philosophy and Current Issues | SMU12202 Communication Skills and Technology | SMU13102 Appreciation of Ethics and Civilization | | | | |
| | SMZXXX01 Co-Curriculum | SMZXXX01 Co-Curriculum | | | | | | | |
| 135 | 17 | 17 | 18 | 17 | 18 | 18 | 5 | 14 | 11 |

KMJ39905 Industrial Training

Total Units for Graduation: 135

| * Please refer to additional NOTE. | PROCESS ENGINEERING | BIOCHEMICAL ENGINEERING | SUSTAINABILITY |
|------------------------------------|---|---|------------------------------|
| Elective I: | KMJ32903 Colloidal and Biomaterials Processing | KMJ33003 Halal Processing | KMJ33103 Sustainable Energy |
| Elective II: | KMJ43203 Energy and Process Utility Engineering | KMJ42503 Food Engineering | KMJ42603 Biomass Utilization |
| Elective III: | KMJ42903 Petrochemical Process | KMJ43003 Pharma and Nutraceutical Engineering | KMJ43103 Fuel Cells |

Note:

- * Must register for students who obtained either Band 1 or Band 2 for Malaysian University English Test (MUET).
- ** Must register for students with ONE of the following criteria 1) Obtained Band 3 in Malaysian University English Test (MUET) 2) Passed SMB10102 Preparatory English with minimum grade C.
- *** For student who obtained Band 4, 5 and 6 in Malaysian University English Test (MUET), they are exempted from taking SMB20102 English for General Communication course and are required to take an optional course to earn enough credit for graduation