BACHELOR OF AGRICULTURAL AND BIOSYSTEMS ENGINEERING WITH HONOURS

Introduction

The Department of Biological and Agricultural Engineering is a leader in higher education for agricultural engineering, offering the Bachelor of Agricultural and Biosystems Engineering with Honours program. This four-year program requires the completion of 137 credits for graduation. Aligned with the national goal of strengthening the agricultural sector to ensure food security and drive economic growth, the program addresses the demand for a skilled workforce capable of tackling challenges in various areas, including the design of agricultural equipment and off-road vehicles, robotics and automation, control systems, and agricultural waste management. Additionally, it focuses on protecting water quality, managing surface and groundwater, developing crop and livestock facilities, and utilizing information technology for plantation and natural resource management.

This program offers four specialization options: Post-Harvest and Environment, Soil and Water Resources, Agricultural Informatics, and Mechanization and Automation. The objectives of the program are: (i) To produce engineers with sufficient knowledge in the field of agricultural and biosystems engineering; (ii) To produce creative and innovative agricultural and biosystem engineers, as well as caring and responsible for society, culture and the environment; and (iii) To produce agricultural and biosystems engineers who could complete advanced design and development problems. Students are also exposed to competitions related to agricultural and biosystems engineering at national and international levels and have the opportunity to undertake practical training and participate in student exchange programs abroad.

Career Opportunities

Job opportunities for graduates of the Bachelor of Agricultural and Biosystems Engineering with Honours program (BKPB) are extensive and diverse, encompassing management, consulting, and construction, as well as research and development, monitoring and control, technical services, sales and marketing, production and processing, business and entrepreneurship, and education and training. This wide range of opportunities is a result of the versatile nature of the BKPB program, which has led to consistently high demand for its graduates. The BKPB program is accredited by the Public Service Department (JPA), the Institution of Engineers Malaysia (IEM), the Board of Engineers Malaysia (BEM), and the Engineering Accreditation Council (EAC). Graduates of the BKPB program also have opportunities to work abroad, as the program is internationally recognized under the Washington Accord.

To date, many BKPB graduates have been employed in various public and private sectors, including the Department of Agriculture, the Kemubu Agricultural Development Authority (KADA), the Muda Agricultural Development Authority (MADA), the Farmers' Organization Authority (LPP), the Federal Land Consolidation and Rehabilitation Authority (FELCRA), the Malaysian Palm Oil Board (MPOB), the Malaysian Agricultural Research and Development Institute (MARDI), the Malaysian Nuclear Agency, the Rubber Smallholders Development Authority (RISDA), the Malaysian Rubber Board, the Malaysian Cocoa Board, Agrobank, the Federal Land Development Authority (FELDA), Marditech, the Malaysian Investment Development Authority (MIDA), Tradewinds Plantation Berhad, the Oil and Gas Industry, the National Hydraulic Research Institute of Malaysia (NAHRIM), KULIM (Malaysia) Berhad, Sime Darby, Genting Plantation, Kuala Lumpur Kepong Berhad, IOI Plantation, Charoen Pokphand Group, Top Glove Corporation Berhad, Sony, public and private institutions of higher learning, polytechnics, and the Ministry of Education Malaysia. There are also graduates who have ventured into entrepreneurship by establishing engineering design firms, fabrication businesses, and engineering equipment supply companies.

Admission Requirements

Bachelor of Agricultural and Biosystems Engineering with Honours (UP6524002) 8 Semester

Minimum Qualification STPM	Minimum Qualification for Matriculation/ Foundation	Minimum Qualification for Diploma/ Equivalent
Meet General University Requirements and PROGRAM SPECIFIC REQUIREMENT Achieve at least a **CGPA of 2.80**; **and** Achieve at least a **Grade B** at the STPM level in the following subjects: • Additional Mathematics; **and** • Physics / Biology; **and** Achieve at least **BAND 3.0** in the Malaysian University English Test **(MUET)** for examinations starting from Session 1 of 2021 or **BAND 3**	**Meet General University Requirements and PROGRAM SPECIFIC REQUIREMENT** Achieve at least a **CGPA of 2.80**; **and** Achieve at least a **Grade B** at the Matriculation/ Foundation level in the following subjects: • Mathematics; **and** • Physics / Biology; **and** Achieve at least **BAND 3.0** in the Malaysian University English Test **(MUET)** for examinations starting from Session 1 of 2021 or **BAND 3** for examinations up to the year 2020;	**Meet General University Requirements and PROGRAM SPECIFIC REQUIREMENT** Hold a Diploma in a relevant field with at least a **CGPA of 3.00** or another qualification recognized by the UPM Senate; **and** Achieve at least **BAND 3.0** in the Malaysian University English Test **(MUET)** for examinations starting from Session 1 of 2021 or **BAND 3** for examinations up to the year 2020; **or**

Minimum Qualification STPM	Minimum Qualification for Matriculation/ Foundation	Minimum Qualification for Diploma/ Equivalent
for examinations up to the year 2020; **or** Achieve at least **BAND 2.0** in the Malaysian University English Test **(MUET)** for examinations starting from Session 1 of 2021 or **BAND 2** for examinations up to the year 2020, and at least a **Grade C** in the English subject at the SPM level; **and** No physical disability that hinders practical work	**or** Achieve at least BAND 2.0 in the Malaysian University English Test **(MUET)** for examinations starting from Session 1 of 2021 or **BAND 2** for examinations up to the year 2020, and at least a **Grade C** in the English subject at the SPM level; **and** No physical disability that hinders practical work.	Achieve at least **BAND 2.0** in the Malaysian University English Test **(MUET)** for examinations starting from Session 1 of 2021 or **BAND 2** for examinations up to the year 2020, and at least a **Grade C** in the English subject at the SPM level; **and** No physical disability that hinders practical work.

Curriculum (2021 – 2025)

The courses offered are divided into three categories: General Courses, Core Courses, and Elective Courses:

Curriculum Components	EAC Requirements (minimum credit hours)	Curriculum Bachelor of Agricultural and Biosystems Engineering with Honours	Percentage (%)
General Courses	No min set value	21	15.3%
Core Courses	90	107	78.1%
Elective Courses		9	6.6%
Total	**135**	**137**	**100%**

Total Credit Hours for Graduation : 137
Duration of Study : 8 semesters (4 years)

Version 17 Okt 2024

Tuition Fees

Code	Programme	Average Cost Per Student Per Year	Tuition Fees Paid by Students Per Year	Government Subsidy to Students Per Year
98-2	Bachelor of Agricultural and Biosystems Engineering with Honours	RM26,315.00	RM4,489.00	RM21,826.00

* Subject to change from time to time.

Contact Officer

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