

# BACHELOR OF SCIENCE BIOTECHNOLOGY(HONS)

KPT/JPS(N/545/6/0102)(MQA/PA9689)01/24



MAHSA  
UNIVERSITY

FACULTY OF MEDICINE AND BIOMEDICAL SCIENCES



" Our world is built on biology and once we begin to understand it, it then becomes a technology"

- Ryan Bethencourt  
Scientist

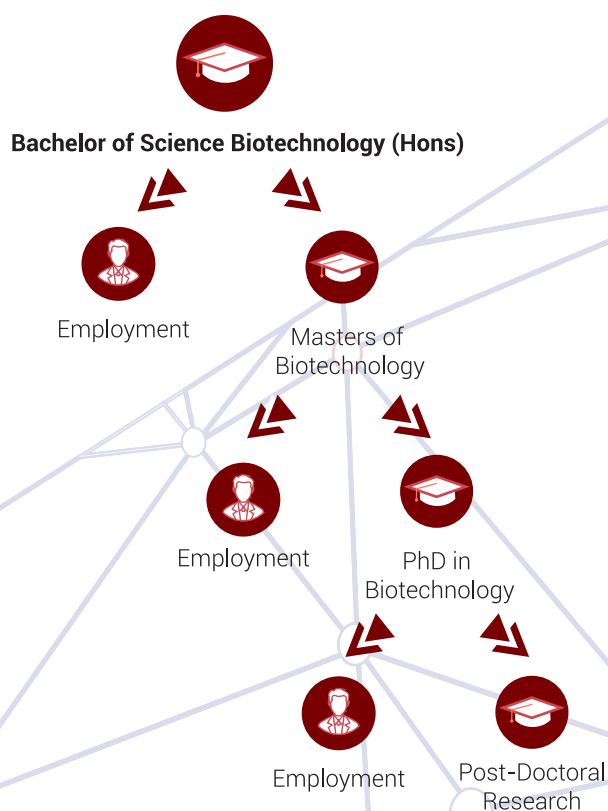


MAHSA University offers the Bachelor of Science Biotechnology (Hons), a 3-year programme for those aspiring for careers in Biotechnology in the areas of industry, medicine and environmental research. In this programme, students will gain knowledge on biology, chemistry, bioprocess engineering, plant and animal biotechnology, statistics, genetics, genetic engineering, immunology, cellular and molecular biology, recombinant DNA technology, etcetera.

Students who have graduated with MAHSA University's Bachelor of Science Biotechnology (Hons) can become academics, scientists, experts in industries, quality analysts, product specialists and entrepreneurs in biotechnology and it's related fields. Essentially, graduates can fulfil the requirements in biotechnology and its associated industries. The skills and subjects that graduates will have learnt will facilitate competent and effective contributions for a healthier and safer community.

## PROGRESSION PATHWAY

## MAHSA360



During their time at MAHSA University, we want to provide all of our students with the opportunity to develop qualities, skills and understanding that go beyond the disciplinary expertise and prepare them for the next steps in their chosen careers.

MAHSA360 is the ecosystem that works to ensure every single student is nurtured and supported throughout the student journey.



# PROGRAMME STRUCTURE

YEAR  
01

Basic Chemistry  
Biostatistics for Biotechnologist  
Biophysics & Instrumentation  
English for Academic Purposes  
Introduction to Biotechnology  
Developmental Biology  
Cell Structure & Dynamics  
Genetics  
Basic Microbiology  
English for Academic Writing  
Bioprocessing  
Cell and Tissue Culture

YEAR  
02

Plant Biotechnology  
Biochemistry  
Genomics & Proteomics  
Animal Breeding  
Youth Development  
Microbial Biotechnology  
Molecular Diagnosis  
Bio Techniques  
Immunology & Immunotechnology  
Research Methodology  
Molecular Biology  
IPR, Biosafety & Bio-ethics  
Industrial Training

YEAR  
03

Nano Biotechnology/Drug Delivery  
Recombinant DNA Technology  
Research Project 1  
Bioinformatics for Biologists  
Personal & Professional Development  
Research Project 2  
Community Service

GENERAL  
MODULES

Community Work 2  
Entrepreneurship  
Youth Development  
**Local Students**  
Hubungan Etnik  
Tamadun Islam & Tamadun Asia (TITAS)  
**International Students**  
Bahasa Melayu Komunikasi 2  
Malaysian Studies

ELECTIVES

**Medical Biotechnology**

- Human Anatomy & Physiology
- Human Molecular Genetics
- Self-Study & Review in Medical Biotechnology
- Molecular Therapeutics
- Applications & Advancements of Medical Biotechnology
- Stem Cell Technology
- Recent Topics in Medical Biotechnology

**Agricultural Biotechnology**

- Plant Tissue Culture Techniques
- Plant Molecular Biology & Plant Genetic Engineering
- Self-Study & Review in Agricultural Biotechnology
- Advancements in Plant Biotechnology
- Bio Fertilizers & Bio Pesticides
- Genetically Modified Plants
- Recent Topics in Agricultural Biotechnology

**Animal Biotechnology**

- Animal Tissue Culture Technology
- Animal Genetic Engineering
- Self-Study & Review in Animal Biotechnology
- Advancements in Animal Biotechnology
- Aquatic Biotechnology
- Genetically Modified Animals
- Recent Topics in Animal Biotechnology

**Industrial Biotechnology**

- Bioprocess & Biochemical Engineering
- Food Processing & Preservation
- Self-Study & Review in Industrial Biotechnology
- Pharmaceutical Biotechnology
- Enzymology & Enzyme Technology
- Beverages & Alcohols
- Recent Topics in Industrial Biotechnology

**Environmental Biotechnology**

- Biodegradation & Bioremediation
- Biomass & Bio Products
- Self-Study & Review in Environmental Biotechnology
- Advancements in Environmental Biotechnology
- Molecular Ecology
- Bio-Energy & Biotransformation
- Recent Topics in Environmental Biotechnology

# ENTRY REQUIREMENTS

## Academic Qualifications

STPM  
A-Level  
UEC  
STAM  
SAM/AUSMAT/CPU  
International Baccalaureate (IB)  
Diploma/Matriculation/ Foundation  
Other

## English Proficiency

## Requirements

Full pass in 2 subjects with a minimum CGPA of 2.00; or  
Pass with at least at grade C in 2 subjects; or  
Pass with at least grade B in 5 subjects; or  
Pass with a minimum grade of Jayyid; or  
Pass with a minimum marks of 60%; or  
Diploma pass with a minimum of 20 marks; or  
  
Related field pass with a minimum CGPA of 2.00; or  
  
Equivalent qualifications recognised by the Government of Malaysia.

MUET	IELTS
Band 3	5.0

# CAREER OPPORTUNITIES

- Bioinformatics/Product Specialist
- Clinical Research Associate
- Medical Coding Professional
- Forensic Scientist
- Greenhouse & Field Expert
- Instrumentation Maintenance/Calibration Technician
- Laboratory Assistant
- Laboratory Automation Specialist
- Laboratory Support Worker
- Pharmaceutical Assistant/Technician
- Documentation Coordinator

# THE VALUE-ADDED ECOSYSTEM



## STUDENTS MOBILITY PROGRAMME

This is a unique opportunity for students to study abroad for up to one year in a foreign country. This study abroad programme lets students experience different cultures and practices from around the world. Ask us about our university partners in over fifty different countries.



## MASTER CLASS PROGRAMMES

Students of this programme are eligible to gain add-on certification in Master Classes. There are more than fifty Master Classes to choose from, and all are designed to further enhance the student's employability, in line with the Industrial Revolution 4.0.



Library



Student Success Centre



High Performance Liquid Chromatography Instrument



Pathology and Cytology Laboratory



Anatomage



Biochemistry Laboratory



[www.mahsa.edu.my](http://www.mahsa.edu.my)

Jalan SP2, Bandar Saujana Putra, 42610 Jenjarom, Selangor, Malaysia

☎ 1800-88-0300 ☎ +603-7931 7118

☎ +603-5102 2200 ☎ [marketing@mahsa.edu.my](mailto:marketing@mahsa.edu.my)

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