

# BACHELOR OF SCIENCE BIOTECHNOLOGY [HONS]

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

**FACULTY OF MEDICINE,  
BIOSCIENCE & NURSING**

“

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

**- Ryan Bethencourt  
Scientist & CEO of Wild Earth**

”

# OVERVIEW

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 its 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.

## PROGRAMME STRUCTURE

### Year 1

- Basic Chemistry
- Biostatistics for Biotechnologist
- Biophysics & Instrumentation
- English for Academic Purposes
- Introduction to Biotechnology
- Developmental Biology

### Year 2

- Plant Biotechnology
- Biochemistry
- Genomics & Proteomics
- Animal Breeding
- Youth Development
- Microbial Biotechnology
- Molecular Diagnosis

### Year 3

- Nano Biotechnology/Drug Delivery
- Recombinant DNA Technology
- Research Project 1
- Bioinformatics for Biologists

- Cell Structure & Dynamics
- Genetics
- Basic Microbiology
- English for Academic Writing
- Bioprocessing
- Cell and Tissue Culture

- Bio Techniques
- Immunology & Immunotechnology
- Research Methodology
- Molecular Biology
- IPR, Biosafety & Bio-ethics
- Industrial Training

- Personal & Professional Development
- Research Project 2
- Community Service

### General Modules

- Youth Development
- Community Work 2
- Entrepreneurship

### LOCAL STUDENTS:

- Tamadun Islam & Tamadun Asia (TITAS)
- Hubungan Etnik

### INTERNATIONAL STUDENTS:

- Malaysian Studies
- Bahasa Melayu Komunikasi 2

### 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 Topic in Medical 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

#### Environmental Biotechnology

- Biodegradation & Bioremediation
- Biomass & Bio Products
- Self-Study & Review in Environmental Biotechnology
- Advancements in Environmental Biotechnology

#### Aggricultural Biotechnology

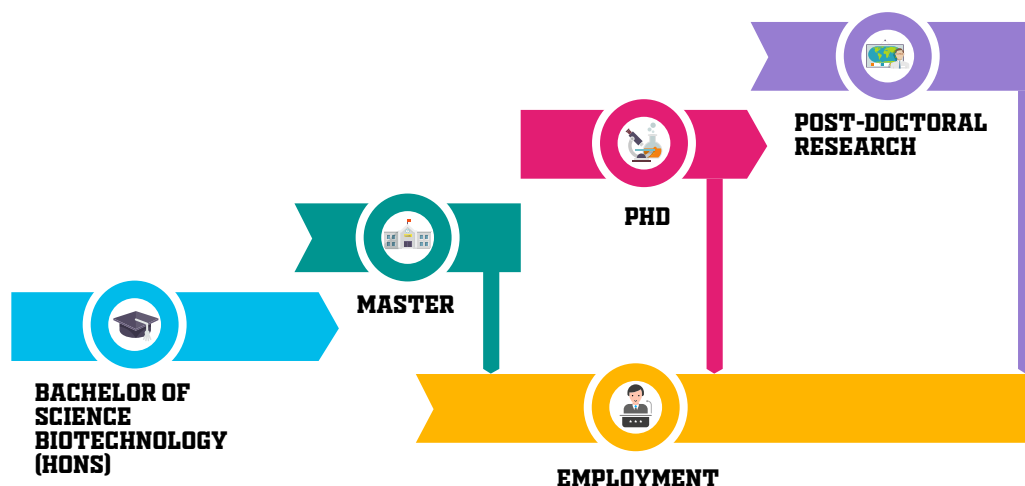
- Plant Tissue Culture Techniques
- Plant Molecular Biology & Plant Genetic Engineering
- Self-Study & Review in Agricultural Biotechnology
- Advancements in Plant Biotechnology
- Bio Fertilizers Bio Pesticides
- Genetically Modified Plants
- Recent Topics in Agricultural Biotechnology

#### Indueneil 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

- Molecular Ecology
- Bio-Energy & Biotransformation
- Recent Topics in Environmental Biotechnology

# PROGRESSION PATHWAY



## ENTRY REQUIREMENTS

### ACADEMIC QUALIFICATION

### REQUIREMENTS

<b>STPM</b>	◆ Full pass in 2 subjects with a minimum CGPA of 2.0 or
<b>A-Level</b>	◆ Pass with at least at grade C in 2 subjects; or
<b>UEC</b>	◆ Pass with at least grade E1 in 5 subjects; or
<b>STAM</b>	◆ Pass with a minimum grade of Jayyid or
<b>SAM/AUSMAT/CPU</b>	◆ Pass with a minimum marks of 60%, or
<b>International Baccalaureate</b>	◆ Diploma pass with a minimum of 20 marks; or
<b>Diploma/Matriculation/Foundation</b>	◆ Related field pass with a minimum CGFA of 2.00; or
<b>Other</b>	◆ Equivalent qualifications recognised by the Government of Malaysia.
<b>English Requirement</b>	◆ MUET: Band 3   TELTS: 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



# MAHSA360

At MAHSA University, we provide our students with the opportunity to develop quality skills and understanding that go beyond their field of study which will prepare them for their next leap upon graduation.

MAHSA 360 is our specially designed ecosystem that works to ensure every student is nurtured and supported throughout their student journey.



## MAHSA'S PASSPORT TO SUCCESS



Professional Industry-Driven Education (P.R.I.D.E) is MAHSA University's specially designed education pathway that give students the best of both academic and professional certifications. Students have the opportunity to gain professional skills through various programmes from MAHSA's collaborations with internationally recognised professional bodies. P.R.I.D.E increases the employability rate of our fresh graduates and puts them on par with the rest in the professional world.

### MASTERCLASS

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

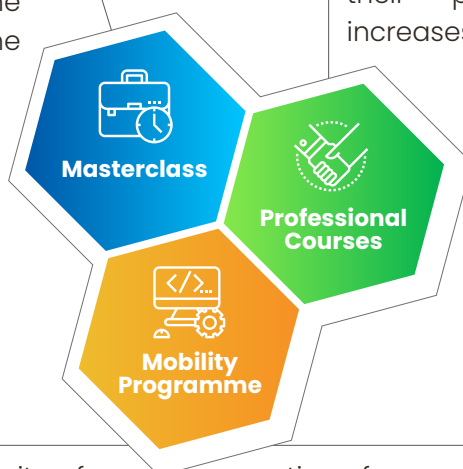
### PROFESSIONAL COURSES

Through MAHSA's collaboration with internationally recognised professional bodies, students will earn certifications that will enhance their professional skills and increases their employability rate.

### MOBILITY PROGRAMME

This is a unique opportunity for students to study abroad for up to one year. This programme lets students experience different cultures and

practices from around the world. Ask us about our university partners in over fifty different countries.





# MAHSA

U N I V E R S I T Y

# BE MORE



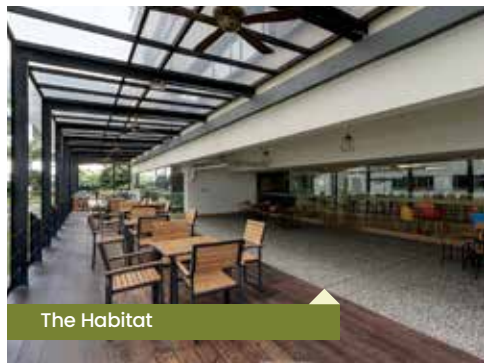
Anatontage



Residences



Biochemistry Lab



The Habitat



Library




Pathology and Cytology Lab


Contact us


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