AIMST UNIVERSITY
DU010(K)
Educating Tomorrow's Leaders

FACULTY OF **APPLIED SCIENCES**

About AIMST University

AIMST University is a premier private university catering to the needs of local and international students. It offers high-quality education globally recognised by the relevant professional bodies and industries. The University also emphasizes international exposure through a network of numerous international partners. In addition, student exchange programmes help our students to develop global perspectives and skill sets. As a result, AIMST's graduates enjoy 100% employability in leading national and international organizations within six months of graduation.

Dean's Message

Prof. Dr. Lee Su Yin
Dean, Faculty of Applied Sciences

The Faculty of Applied Sciences (FAS) at AIMST University is the right place to seek knowledge and experience. FAS offers Biotechnology and Bioinformatics programmes which are dynamic fields at the forefront of scientific innovation, offering limitless opportunities to shape the future. Our faculty boasts experienced faculty members, state-of-the-art facilities, and a vibrant academic community. At FAS, you will embark on a transformative educational experience where you'll gain hands-on experience, develop critical thinking skills, and contribute to cutting-edge research that addresses global challenges in healthcare, agriculture, environmental sustainability, and more. The faculty is actively engaged in various cutting-edge research and innovation in the fields of cold-chain free vaccine development, cancer research using CRISPR-Cas technology, stem cells, phage therapy, diagnostic biosensors, AI and machine learning in bioinformatics, microbiome research and many more. Our network of academic and research collaborations globally offers opportunities for students to pursue internships abroad. The prospects of biotechnology and bioinformatics are incredibly promising. Join us and experience a transformative educational journey that will lead you to a fulfilling and impactful career.

Diploma in Biotechnology

(N/0512/4/0004) (10/28) (MQA/FA 15061)

The Diploma in Biotechnology programme will provide adequate knowledge and essential skills to the student on the scope of biotechnological processes that impact our daily lives.

Uniqueness of the Programme

- Highly experienced and internationally qualified lecturers
- Credit transfer pathway for bachelor degree
- Fully equipped labs and facilities to hone your practical skills
- Learn from research-active academics with strong industry connections, supported by world class teaching and research facilities.
- Zero upfront payment for tuition fee (fully covered by PTPTN (for B40 applicant)

Course Structure

YEAR 1	YEAR 2
• Basic Chemistry • Biochemistry • Biocomputing • Biodiversity • Biophysics • Cell and Molecular Biology • Current Topics in Biotechnology • English 1 • English II • Food Technology • Genetics • Microbiology • Mathematics • Penghayatan Etika & Peradaban or Bahasa Melayu Komunikasi I • Introduction to Communication • Kursus Integriti & Anti Rasuah • U4 Activities	• Animal Biotechnology • Bio-entrepreneurship • Bioinformatics • Biomolecular Diagnostics • Biosafety & Biosecurity • Biostatistics • Crop Biotechnology • Environmental Biotechnology • Industrial Bioprocess & Fermentation Technology • Industrial Training • Instrumentation in Biotechnology • Recombination DNA Technology • Research Methods & Scientific Writing

Entry Requirement

- SPM or its equivalent
  Pass with three (3) credits in Mathematics, one science subject and one any other subject
- STPM or its equivalent
  Pass with a minimum of Grade C (GPA 2.00) in any subject, and possess SPM with three (3) credits in Mathematics, one science subject and one any other subject
- STAM or its equivalent
  Pass with a minimum grade of Maqbul, or its equivalent and possess SPM with three (3) credits in Mathematics, one science subject and one any other subject
- SKM
  (Level 3, MQF) in a related field and possess SPM with one (1) credit in Mathematics and pass in English
- A Certificate (Level 3, MQF)
  Pass in a related field with a minimum CGPA of 2.00, or its equivalent.
- Other qualifications
  Will be assessed and referred for approval on case by case basis

  NOTE
  The credit requirement at SPM level for STPM and STAM candidate can be waived if the grades obtained at the STPM / STAM level are equivalent or higher.

Bachelor of Science (Honours) Biotechnology

(R3/0512/6/0024) (07/28) (A 9263)

Biotechnology programme is designed to expose students to science driven knowledge and skills for various applications in the field of Biotechnology.

Uniqueness of the Programme

- Excellent placement records
- Overseas industrial training opportunity.
- Excellent rating for Biotechnology programme by MQA
- Programmes crafted for Industrial Revolution 4.0 (IR 4.0)
- Active research collaboration with local and international universities

Course Structure

YEAR 1	YEAR 2	YEAR 3
• Biochemistry • Biocomputing • Biodiversity • Biophysical chemistry • Cell and Molecular Biology • English for Specific Academic Purposes • English for Professional Purposes • Genetics • Introduction to Communication • Microbiology • Self Reliance & Social Responsibility • Falsafah & Isu Semasa • Penghayatan Etika & Peradaban (Malaysian Students) or Bahasa Melayu Komunikasi 2 (International students) • Kursus Integriti & Anti Rasuah U4 Activities	• Animal Biotechnology • Bioinformatics • Bioinstrumentation • Bioprocess Technology • Biostatistics • Food Technology • Genetic Engineering • Immunology • Research Methodology and Scientific Writing • Sociological Perspectives • Algal and Fungal Science / Downstream Processing / Laboratory Biorisk Management / Plant Science / Virology (Electives: Choose 3)	• Bioethics, Bioregulation & Biosafety • Biomolecular Diagnostics • Business Management • Crop Biotechnology • Environmental Biotechnology • Industrial Training • Molecular Modeling • Research Project • Aquaculture / Biopython / Comparative Genomics / Forensic Science / Medical Biotechnology / Metabolomics/ Pharmacogenomics / Professional Skills Development (Electives: Choose 6)

Entry Requirement

- STPM or its equivalent;
  Pass with a minimum of Grade C (GPA 2.00) in any two (2) subjects and possess SPM with three (3) credits in Mathematics, one science subject and one any other subject.

- UEC
  Grade B in 5 subjects

- STAM
  Pass with a minimum grade of Jayyid, or its equivalent; and possess SPM with three (3) credits in Mathematics, one science subject and one any other subject,

- Matriculation/Foundation or its equivalent,
  Pass with a minimum CGPA of 2.00, and possess SPM with three (3) credits in Mathematics, one science subject and one any other subject.

- A Diploma (Level 4, MQF) in a related field
  Pass with a minimum CGPA of 2.00

- Other qualifications
  Will be assessed and referred for approval on case by case basis

  NOTE
  International students are required to achieve a minimum score of 5.0 in IELTS.

Bachelor of Science (Hons) Bioinformatics

(R/421/6/0038) (12/26) (MQA/FA 6184)

Bioinformatics is a exciting and challenging multidisciplinary field that utilise information technology to process and analyses huge amount of biological data. It brings together the knowledge of bioinformatics with the tremendous potential of biotechnological tools for wealth and knowledge creation.

Uniqueness of the Programme

- Excellent placement records
- Overseas industrial training opportunity.
- Driven by the Centre of Excellence for Omics-Driven Computational Biodiscovery (COMBio) which has won global recognitions and collaborations with top universities in the world.
- Programmes crafted for Industrial Revolution 4.0 (IR 4.0)
- The leader of bioinformatics education and training provider.

Course Structure

YEAR 1	YEAR 2	YEAR 3
• Biochemistry • Biocomputing • Biodiversity • Biophysical chemistry • Cell and Molecular Biology • English for Specific Academic Purposes • English for Professional Purposes Genetics • Introduction to Communication • Microbiology • Self Reliance & Social Responsibility • Falsafah & Isu Semasa • Penghayatan Etika & Peradaban (Malaysian Students) or Bahasa Melayu Komunikasi 2 (International students) • Kursus Integriti & Anti Rasuah	• Basic Mathematics • Bioinformatics • Bioinformatics Trends • Bioinstrumentation • Biostatistics • Database Management • Genetic Engineering System • Object Oriented Programming with C++ • Perl Programming and Bioperl • Transcriptomics and Proteomics • U4 Activities • Algal and Fungal Science / Biomathematics / Downstream Processing / Introduction to Algorithms / Laboratory Biorisk Management / Permutations and Combinations / Plant Tissue and Animal Cell Culture / Virology (Electives: Choose 5)	• Comparative Genomics • Industrial Training • Molecular Modeling • Molecular Phylogeny and Evolution • Next Generation Sequence Analysis • Research Methodology • Research Project • Web Designing and Internet Programming • Artificial Neural Network / Bioethics, Bioregulation & Biosafety / Biopython / Business Management / Forensic Bioinformatics/ Medical Biotechnology / Metabolomics / Pharmacogenomics (Electives: Choose 6)

Entry Requirement

- STPM / A-level
  Pass with CGPA ≥ 2.0 (Grade C) in 3 subjects including Biology
- UEC
  Grade B in 5 subjects
- Matriculation / Foundation in Sciences / Pre-Medical courses** (courses ≥ 1 year in the same institution)
  Pass in 3 subjects including Biology (Min 50% /Grade C / CGPA 2.0)
- Canadian International Matriculation Program (CIMP) /South Australian Matriculation (SAM) / Canadian Pre-University (CPU) / Monash University Foundation Year (MUFY) / New South Wales (NSW) / Higher School Certificate (HSC) / University of New South Wales (UNSW)
  Grade C in 3 subjects including Biology
- Diploma (Level 4, KKM) (Computer Science, IT/ Health Sciences or any diploma in Science)
  Min Pass 50% or Grade C or CGPA ≥ 2.0
- Degree (Level 6, KKM) (Computer Science, IT/ Health Sciences or any diploma in Science)
  Min Pass 50% or Grade C or CGPA ≥ 2.0
- International Baccalaureate (IB)
  Pass with min 24 score
- Other qualifications
  Will be assessed and referred for approval on case by case basis

Bachelor of Science (Honours) Biotechnology with Entrepreneurship

(N/0512/6/0013) (08/29)(MQA/PA17503)

The Biotechnology with Entrepreneurship program is designed to provide students with science-driven knowledge and entrepreneurial skills for diverse applications in the field of biotechnology. This integrated approach prepares graduates to innovate and lead in the biotech industry while successfully managing and launching biotech ventures.

Uniqueness of the Programme

- Pioneering Integration of Biotechnology and Entrepreneurship in Malaysia
- High demand for dual skills
- Focus on biotech start-up ecosystem
- Enhanced career flexibility
- Alignment with national biotechnology policy

Course Structure

YEAR 1	YEAR 2	YEAR 3
• Biophysical Chemistry • Genetics • Biodiversity • Cell and Molecular Biology • Microbiology • Biochemistry • Introduction to Information Technology • Self-Reliance and Social Responsibility • English for Specific Academic Purposes • English for Professional Purposes • Introduction to Communication • Falsafah & Isu Semasa • Penghayatan Etika & Peradaban (Malaysian Students) or Bahasa Melayu Komunikasi 2 (International students) • Kursus Integriti & Anti Rasuah • U4 Activities	• Research Methodology & Scientific Writing • Bioprocess Technology • Genetic Engineering • Bioinformatics • Biostatistics • Bioethics, Bioregulation & Biosafety • Downsteam Processing / Laboratory Biorisk Management / Medical Biotechnology/ Animal Biotechnology / Food Technology / Metabolomics (Electives: Choose 4) • Principles of Management • Principles of Accounting • Principle of Entrepreneurship	• Research Project • Crop Biotechnology • Environmental Biotechnology • Biomolecular Diagnostics • Foundation of Marketing • Economics • Human Resource • Management • Entrepreneurial Finance • Small Business Management • Technology Innovation & Commercialization / Small Business Management / Business Plan Development / Business and Cyber Law / E- Commerce (Electives: Choose 2) • Industrial Training

Entry Requirement

- STPM or its equivalent
  Pass with a minimum of Grade C (GPA 2.00) in any two (2) subjects and possess SPM with three (3) credits in Mathematics, one science subject and one any other subject

- UEC
  Grade B in 5 subjects

- STAM
  Pass with a minimum grade of Jayyid, or its equivalent; and possess SPM with three (3) credits in Mathematics, one science subject and one any other subject

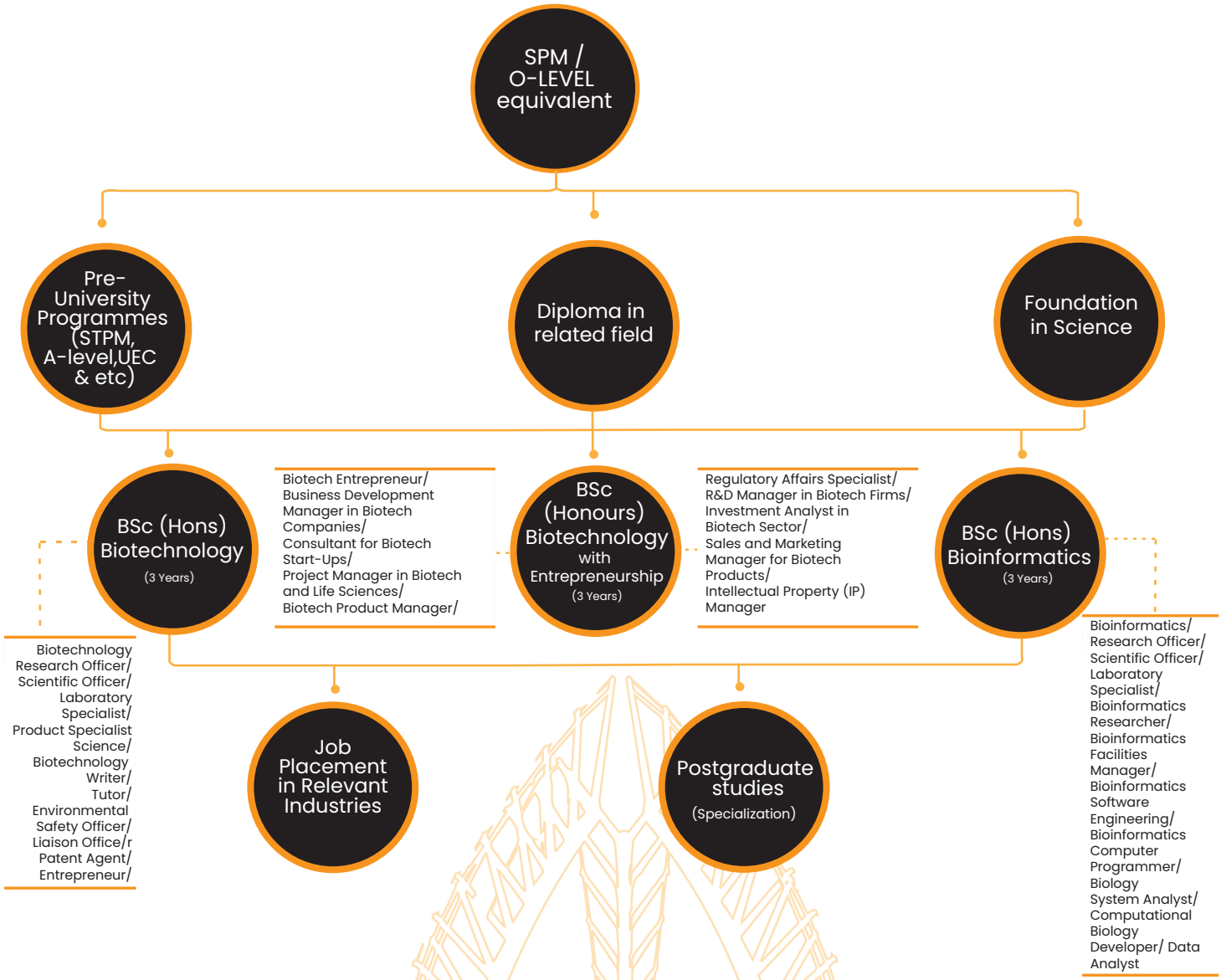
- Matriculation/Foundation or its equivalent
  Pass with a minimum CGPA of 2.00, and possess SPM with three (3) credits in Mathematics, one science subject and one any other subject

- A Diploma (Level 4, MQF) in a related field
  Pass with a minimum CGPA of 2.00

- Other qualifications
  Will be assessed and referred for approval on case by case basis

  NOTE:
  International students are required to achieve a minimum score of 5.0 in IELTS or Band 3 in MUET or its equivalent.

Study Pathway



Postgraduate Studies

◆ MSc Biotechnology (R2/545/7/0051) (02/27) (A 4623)

Entry Requirement

- A bachelor's degree in the field or related fields with a minimum CGPA of 2.75 or equivalent, as accepted by the HEP Senate
- A bachelor's degree in the field or related fields or equivalent with a minimum CGPA of 2.50 and not meeting CGPA of 2.75, can be accepted subject to rigorous internal assessment
- A bachelor's degree in the field or related fields or equivalent with minimum CGPA of 2.00 and not meeting CGPA of 2.50, can be accepted subject to a minimum of 5 years working experience in the relevant field and rigorous internal assessment.
- Candidates without a qualification in the related fields or relevant working experience must undergo appropriate prerequisite courses determined by the HEP and meet the minimum CGPA based on first and second requirement

Duration / Mode

- Full-time : 2-4 years / Part-time : 3-6 years
  Research Mode

◆ Doctor of Philosophy (Biotechnology) (R2/545/8/0048) (08/25) (A 8453)

Entry Requirement

- A master's degree in the field or related fields accepted by the HEP Senate
- Other qualifications equivalent to a master's degree recognised by the Government of Malaysia
- Candidates without a related qualification in the fields or working experience in the relevant fields must undergo appropriate prerequisite courses determined by the HEP.
- Bachelor's degree in related area with First-Class (CGPA 3.67 or highers) (fast-track to PhD)

Duration / Mode

- Full-time : 3-6 years / Part-time : 4-8 years
  Research Mode