



**HERIOT
WATT**
UNIVERSITY
UK | DUBAI | MALAYSIA

Engineering & Built Environment

2026/27

Engineering & Built Environment

at Heriot-Watt University Malaysia

As the leading research institution in Scotland, UK and Dubai, we have a reputation for excellence that spans the globe. Our programmes for professionals cover engineering, built environment, oil and gas, and more.

We understand the importance of building future thinkers and leaders who have global perspectives. And we do that by equipping them with the ability to explore international opportunities, engage in our inter-campus transfer programme and gain experience with real-world projects. That means exposure to practical industry-specific, problem-solving tasks via collaborations with local and international companies, government agencies and professional bodies.

While our undergraduate programmes are full-time, our postgraduate programmes offer flexibility where students can study while remaining in full-time employment - ensuring that the learning and advancement process never has to be put on pause.

Discover

the intakes and durations of our undergraduate and postgraduate programmes today.

Undergraduate

MEng (Hons) Chemical Engineering - 4 Years

Intake: January, September

MEng (Hons) Mechanical Engineering - 4 Years

Intake: January, September

MEng (Hons) Electrical and Electronic Engineering - 4 Years

Intake: September

MEng (Hons) Robotic and Mechatronic Engineering - 4 Years

Intake: September*

MEng (Hons) Civil Engineering - 4 Years

Intake: January, September

BSc (Hons) Quantity Surveying - 3 Years

Intake: January, September

Postgraduate

MSc Petroleum Engineering - 1 Year

Intake: January, September

* Not available for the Go Global programme

MEng (Hons) Chemical Engineering

KPT/JPS (R2/0711/6/0026) (MQA/FA5107) 11/33



Intake: January, September

This programme will allow you to understand the chemical and physical principles underlying chemical engineering concepts and help you to cultivate the ability to apply your skills to real, practical engineering problems. It will also develop your transferable skills in communication, team-work, industrial and commercial awareness and career management.

Accreditation

This programme is accredited by the IChemE on behalf of the Engineering Council UK. Students completing an IChemE accredited degree are deemed to have met part or all of the academic requirements as a Chartered or Incorporated Engineer and are in a strong position to move on to achieve professional engineering status after a period of initial professional development in industry.

The accredited MEng fully meets the exemplifying academic benchmark requirements, for registration as a Chartered Engineer (CEng). Our MEng programme is also accredited by the Malaysian Qualifications Agency (MQA), the Board of Engineers Malaysia (BEM), and fully accredited by the Malaysian Engineering Accreditation Council (EAC).

Accredited by:



Year 1

- Industrial Chemical Processes
- Fluid Mechanics
- Chemical Thermodynamics and Introductory Chemical Kinetics
- Mathematics for Engineers and Scientists 3
- Thermodynamics
- Heat Transfer
- Process Design A
- Mathematical Modelling for Chemical Engineers

Year 2

- Separation Processes A
- Chemical Reaction Engineering
- Process Control
- Sustainable Development and Engineering Management
- Separation Processes B
- Multiphase Thermodynamics
- Process Health and Safety
- Bioprocessing

Year 3

- Separation Processes C
- Sustainability Management and Process Economics
- Process Optimisation, Integration and Analysis
- Particle Technology
- Reaction Engineering
- Applied Transport Phenomena
- Process Engineering Design Project

Students undertake a compulsory industrial training placement at the end of Year 3.

Year 4

Two major projects are taken in this year: an in-depth individual research project; and an enhanced group-based design project, where students can demonstrate their skills in process design and commercial awareness, culminating in a board-style presentation to senior industry leaders.

- Design Project
- Research Project
- Professional and Industrial Studies
- Environmental Impact Assessment

Plus 2 optional courses related to Oil and Gas Technology, Bioprocessing, Energy Engineering, Environmental Engineering, and Formulation Engineering.

Potential Careers

- Chemical Plant Engineer • Process Engineer • Production Engineer • Process Safety Engineer • Energy Engineer
- Environmental & Sustainability Engineer • Materials Engineer • Technical Consultant

Testimonial



Daphne Tan

*Class of 2020
Senior Project Engineer
at Green Lagoon Technology Sdn Bhd*

Studying at Heriot-Watt gives me the opportunity to engage with lecturers who are always actively researching and exploring new technologies and industries. While completing my final year project, I was able to explore technologies that produce alternatives to fossil fuels, which sparked my interest and passion in renewable energy as my career pathway. I always believe in staying open-minded in everything I do, as you never know what is coming towards you. Heriot-Watt is a good place to be a curious student, as it keeps me thinking, exploring, and engaging with others. Another highlight is the beautiful lake view on campus instead of a shopping mall.

MEng (Hons) Mechanical Engineering

KPT/JPS (R2/0714/6/0041) (MQA/FA5108) 11/33



Intake: January, September

This programme aims to produce graduate engineers who are able to meet society's needs by the creation of products or processes that benefit the individual or economy. Many of the courses contextualise mechanical engineering science principles with mini-projects and students will work in groups to produce a solution to an engineering problem.

The core courses of Design and Manufacture, Sustainable Development, and Engineering Management are particularly aimed at bringing knowledge from all engineering science disciplines together in a project. The individual project in Year 4 allows students to become specialists in an area of their choice by working with an academic member of staff on a particular niche area of Mechanical Engineering.

Accreditation

This programme is accredited by the IMechE on behalf of the Engineering Council UK. Students completing an IMechE accredited degree are deemed to have met part or all of the academic requirements for registration as a Chartered or Incorporated Engineer and are in a strong position to move on to achieve professional engineering status after a period of initial professional development in industry.

The accredited MEng fully meets the exemplifying academic benchmark requirements, for registration as a Chartered Engineer (CEng). Our MEng programme is also accredited by the Malaysian Qualifications Agency (MQA), the Board of Engineers Malaysia (BEM), and fully accredited by the Malaysian Engineering Accreditation Council (AEC).

Accredited by:



Year 1

- Mechatronics and Metaskills
- Fluid Mechanics
- Mechanics of Materials A
- Mathematics for Engineers and Scientists 3 and 4
- Introduction to Dynamics
- Thermodynamics A
- Design and Manufacture 2

Year 2

- Sustainable Development and Engineering Management
- Design and Manufacture 3 and 4
- Mechanics of Materials B
- Computational Fluid Dynamics and Compressible Fluids
- Dynamics and Control
- Thermodynamics B
- Automotive Technologies 1 (Optional)
- Energy Studies (Optional)

Year 3

- Industrial Design and Manufacture (double credits)
- Fluid Machines for Power Generation and Propulsion
- Heat Exchangers and Heat Transfer
- Advanced Mechanics of Materials
- Compressible Fluid Dynamics
- Advanced Thermodynamic Applications
- Advanced Control

Students undertake a compulsory industrial training placement at the end of Year 3.

Year 4

- Professional and Industrial Studies
- Advanced Manufacturing Technologies
- Engineering Group Project (triple credits)
- Engineering Individual Project (double credits)
- Failure Accident Analysis

Students take a total of eight courses per year including core and optional courses as well as projects.

Potential Careers

- Mechanical Design Engineer • Manufacturing Engineer
- Automotive Engineer • Aerospace Engineer • Thermal & HVAC Engineer • Product Development Engineer
- Maintenance Engineer • Energy Engineer • Technical Consultant

Testimonial



Nixon Thomas

Class of 2026

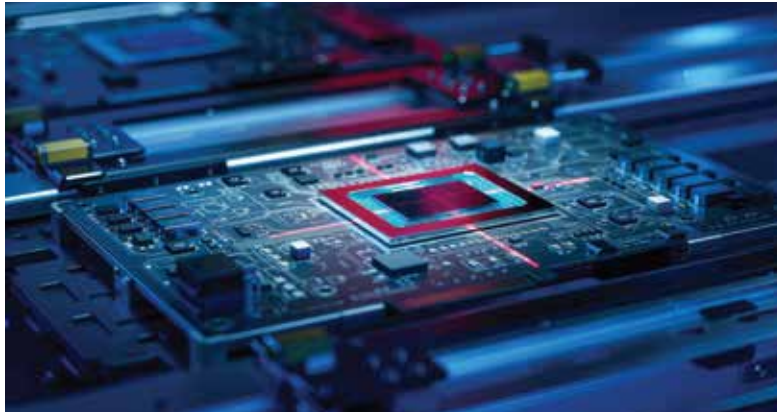
Mechanical Engineer

at PT. Lentera Indo Makmur, Indonesia

Throughout my university years I worked on projects that required critical thinking and collaboration. Each one pushed me to think outside the box, whether designing systems, running simulations or crafting reports. Beyond lectures, I learned by engaging in hands-on tasks and seeing how everything fit together. What made it fulfilling was the community. I found friends who supported each other academically and personally, while making time for fun. Dealing with stress taught me to be more self-aware and resilient. My time in Malaysia gave me knowledge, growth and memories that I carried into my studies in Scotland through the Go Global programme.

MEng (Hons) Electrical and Electronic Engineering

KPT/JPS (R/523/6/0265) (MQA/FA6194) 08/27



Intake: September

From the electricity that powers our lives to the mobile phones that enable communication and provide entertainment, the technologies around us inspire wonder. Highly trained engineers are needed to specify and design such systems and devise electronic engineering solutions for future challenges such as electric transportation, renewable energy generation, robot systems and medical diagnostics.

Accreditation

This programme is accredited by the IET on behalf of the Engineering Council UK. Students completing an IET accredited degree are deemed to have met part or all the academic requirements for registration as a Chartered or Incorporated Engineer and are in a strong position to move on to achieve professional engineering status after a period of initial professional development in industry.

The accredited MEng fully meets the exemplifying academic benchmark requirements, for registration as a Chartered Engineer (CEng). Our MEng programme is also accredited by the Malaysian Qualifications Agency (MQA), the Board of Engineers Malaysia (BEM) and fully accredited by the Malaysian Engineering Accreditation Council (EAC).

Accredited by:



Year 1

- Circuits and Analysis
- Digital Design and Programming
- Mathematics for Engineers and Scientists 3 and 4
- Sustainable Development and Engineering Management
- Introduction to Electricity and Magnetism
- Electrical Power and Machines
- Computer Architecture and Embedded Systems

Year 2

- Semiconductor Electronics
- System Project
- Probability, Statistics, and Information Theory
- Time Frequency and Signal Analysis
- Signals and Systems
- Electrical Energy Systems
- Electromagnetism

Year 3

- MEng Group Project 1 and 2
- Professional and Industrial Studies

Optional Courses:

- Linear Control
- Digital Signal Processing
- Advanced Analogue Electronics
- Sustainable Energy and Power Systems
- Communication Devices and Systems

Students undertake a compulsory industrial training placement at the end of Year 3.

Year 4

MEng students do Project 1 and Project 2 plus four optional courses.

Optional Courses:

- Electrical Power System
- Digital Signal Processing
- Distributed Generation
- Renewable Generation and Conversion

Students take a total of eight courses per year including core and optional courses as well as projects.

Potential Careers

- Electrical Engineer • Electronics Design Engineer
- Power Systems Engineer • Control Systems Engineer
- Telecommunications Engineer • Embedded Systems Engineer
- Semiconductor Engineer • Instrumentation Engineer • Technical Consultant

Testimonial



Hawwick Ooi

*Class of 2023
Executive Project Engineer
at Land Transport Authority (LTA) Singapore*

I chose to study MEng Electrical and Electronic Engineering at Heriot-Watt University Malaysia because of its strong reputation, industry-focused curriculum, and supportive lecturers. The challenging nature of the field fascinated me, especially how complex systems can be controlled by something as small as a chip. My experience at Heriot-Watt shaped me into who I am today, providing both academic excellence and practical industry exposure through projects and internships. I am proud to be an alumnus, and I encourage future students to make full use of the opportunities and resources available here.

MEng (Hons) Robotic and Mechatronic Engineering

KPT/JPS (N/0713/6/0062) (MQA/PA18142) 03/32



Intake: September*

Robotic and mechatronic is an emerging field that are both high priority and high impact. Graduates from this programme can contribute to the growing interest and demand in the industry for professional robotic and mechatronic engineers, locally and abroad. As robotics and artificial intelligence become the key technology enabler for the future, graduates from this programme will be at the forefront of designing innovative products and devices.

The main aim of this programme is to equip students with strong theoretical and practical skills in robotics and mechatronic to work at a professional level in related industries. This programme will combine a broad range of multidisciplinary knowledge and skills in mechanical engineering, electrical and electronic engineering with intelligent embedded control to solve complex engineering problems. Project modules are also introduced to enable students to have hands-on experience and apply the knowledge into building and designing robotic and mechatronic systems.

Accreditation

This programme has provisional accreditation by the Malaysian Qualifications Agency (MQA).

** Not available for the Go Global programme*

Year 1

- Mathematics for Engineers and Scientists 3 and 4
- Circuits and Analysis
- Digital Design and Programming
- Mechanics of Materials A
- Dynamics
- Mechatronics Systems Group Project
- Introduction to Robotics

Year 2

- Probability, Statistics, and Information Theory
- Signals and Systems
- Sustainable Development and Engineering Management
- Fluid Mechanics A
- System Project
- Design and Manufacture 2
- Time Frequency and Signal Analysis

Year 3

- Robotic and Mechatronic Group Project 1 and 2
- Professional and Industrial Studies
- Embedded Systems
- Linear Control
- Image Processing
- Robotic Mechanical Systems

Students undertake a compulsory industrial training placement at the end of Year 3.

Year 4

- Project 1 and 2
- Industrial Automation and Instrumentation
- Robotics Systems Science
- Advanced Digital Electronic
- Machine Vision
- Embedded Software

Students take a total of eight courses per year including core and optional courses as well as projects.

Potential Careers

- Robotics Engineer • Mechatronics Engineer
- Automation Engineer • Control Systems Engineer
- Embedded Systems Engineer • Robotics Software Engineer
- Machine Vision Engineer • R&D Engineer
- Robotics Consultant

Testimonial



Zhao Chen

Current Student

I really enjoy the atmosphere here. The lecturers and classmates are super nice and helpful, which creates a very supportive environment for international students like me. If you are interested in both electrical and mechanical engineering, this is a great choice. It's always exciting to work on the 'cool stuff', like operating robot arms or making a line-following buggy by yourself. It's also good for making friends, since we share a few classes with students from other majors like Electronic and Electrical, and Mechanical Engineering. I also want to thank all the lecturers for being so supportive and for making these challenging subjects fun to learn.



The National Robotarium

The UK's centre for Robotics and Artificial Intelligence

As global leaders in robotics and engineering, the National Robotarium is strategically located at the **Heriot-Watt University, Edinburgh campus** spanning 40,000sq ft.

The stunning purpose-built £22.4m facility houses unrivalled technology, laboratories and equipment; central for the testing and development of robotics and AI solutions, offering flexible spaces for science, engineering and industry to work collaboratively under one roof.

The global research institute is home to three distinct areas of research and development:



■ **Robotics and Autonomous Systems (RAS)**



■ **Human-Robot Interaction (HRI)**



■ **Precision Laser Applications (PLS)**

The National Robotarium fosters the teaching and development of the next generation of roboticists, producing highly-skilled graduates who are trained to conduct world-leading research with a market focus, and development engagement and learning programmes to equip the current and future workforce with robotics, data, computer science and other STEM skills.

MEng (Hons) Civil Engineering

KPT/JPS (R/526/6/0108) (MQA/FA6195) 08/27



Intake: January, September

This programme covers core civil engineering disciplines, including Structures, Geotechnics, Water, and Highway Engineering, equipping you with the technical expertise and professional skills to progress towards becoming a chartered civil engineer.

You will focus on analysis and behaviours of materials in the early years, before progressing to design and management. Artificial Intelligence is integrated through a specialist course to develop your understanding on its applications in civil engineering. You will also develop the technical expertise, professional capabilities and personal attributes needed to thrive in the dynamic built environment industry.

Accreditation

This degree is accredited by the Joint Board of Moderators (JBM) comprising the Institution of Civil Engineers, the Institution of Structural Engineers, the Institute of Highway Engineers, the Chartered Institution of Highways and Transportation, and the Permanent Way Institution on behalf of the Engineering Council for the purposes of fully meeting the academic requirement for registration as a Chartered Engineer (CEng). See www.jbm.org.uk for further information.

This programme is also fully accredited by the Engineering Accreditation Council (EAC) and graduates are eligible to register with the Board of Engineers Malaysia (BEM) as graduate engineer after completion of the four years study. This programme is also accredited by the Malaysian Qualifications Agency (MQA).

Our 5-Star rating in Talentbank's Graduate Employability (GE) Index 2026 recognises our commitment to producing career-ready graduates with practical skills, professional competencies and a global perspective. Through industry-relevant learning and real-world exposure, our students are equipped to meet the evolving needs of employers and build successful careers in an increasingly competitive global workforce.



Accredited by:



Year 1

- Analysis of Determinate Structures
- Hydraulics and Hydrology A
- Surveying and GIS
- Mathematics for Engineers and Scientists 3
- Civil Engineering Materials
- Stress Analysis and Element Strength
- Design Studies A - Problem Solving
- Statistics for Science

Year 2

- Indeterminate Structures
- Geology and Soil Properties
- Design of Steel Elements
- Transport Design, Infrastructure and Society
- Hydraulics and Hydrology B
- Geotechnics A - Intro to Soil Mechanics
- Design of Concrete Elements
- Environmental Technology and Management

Year 3

- Geotechnics B - Geotechnical Applications
- Highway Engineering
- Structural Element Design
- Finite Element Method Linear Analysis
- Foundation Engineering
- Plastic Analysis of Structures
- Urban Drainage and Water Supply
- Civil Engineering Design Project
- Industrial Training (Min 8 Weeks)

Year 4

- Civil Engineering Professional Design Project
- Dissertation 1 and 2 (Civil Engineering Discipline)
- Project Management Theory and Practice
- Construction Financial Management
- Project Management Strategic Issues

Optional Courses:

- Finite Element Method Nonlinear Analysis
- Machine Learning and Programming

Potential Careers

- Engineering professionals

Testimonial



Alicia Charles Barker

Class of 2023
Structural Engineer
at T.Y.Lin International Sdn Bhd

Studying Civil Engineering at Heriot-Watt University has been an incredibly rewarding journey, with a well-structured course that balance theoretical knowledge and real-world applications. Working on group projects with peers from around the world has strengthened my teamwork and communication skills while giving me a global perspective that's important in today's engineering industry. The academics are not only experts in their fields but also approachable mentors who genuinely care about your success. Their industry insight and guidance have helped me feel fully prepared to step confidently into my civil engineering career.

BSc (Hons) Quantity Surveying

KPT/JPS (R2/0734/6/0001) (MQA/FA4369) 06/29



Intake: January, September

Our programme is internationally recognised for the quality of its research and teaching, and is Scotland's top rated construction management department. We equip graduates with the knowledge and experience necessary to ensure that built environment projects are sustainable, cost efficient and constructed to the highest standards.

Quantity Surveying is about providing clients of the construction industry with financial, contractual and technical advice ensuring they get value for money from the buildings they construct. The modern quantity surveyor is a construction professional who may be involved at all stages of the design and construction process, from providing business strategy advice, working with architects and design team consultants, through to overseeing the onsite construction phase. The quantity surveyor has a sound understanding of construction technology, project cost planning and control and contractual issues. This programme provides you with all of the skills and knowledge necessary to become a successful quantity surveyor.

Accreditation

This programme is accredited by the Royal Institution of Chartered Surveyors (RICS), Board of Quantity Surveyors Malaysia (BQSM) and the Chartered Institution of Civil Engineering Surveyors (ICES). This programme is also accredited by the Malaysian Qualifications Agency (MQA).

Our 6-Star rating in Talentbank's Graduate Employability (GE) Index 2026 recognises our commitment to producing career-ready graduates with practical skills, professional competencies and a global perspective. Through industry-relevant learning and real-world exposure, our students are equipped to meet the evolving needs of employers and build successful careers in an increasingly competitive global workforce.



Accredited by:



Year 1

- Construction Technology: Structure and Fabric
- Commercial Law
- Surveying and Geographic Information System (GIS)
- Cost Modelling and Measurement
- eConstruction
- Building Services Technology
- Principles of Property Valuation
- The Economy

Year 2

- Safety Management and Site Establishment
- Construction Technology for Commercial Building
- Procurement and Contracts
- Design Cost Planning and Control
- Measurement and Cost Evaluation
- Design Issues
- Design for Construction
- Innovation in Construction Practice

Year 3

- Cost and Value Management
- QS Practice
- Design Project
- Dissertation
- Construction Information Management
- Business Management in the Built Environment

Students take a total of eight courses per year including core, optional and elective courses/projects.

Potential Careers

- Professional Quantity Surveyor • Chartered Quantity Surveyor • BIM Consultant / BIM Manager • Contract Administrator • Claims Consultant • Arbitrator / Mediator • Risk Advisor / Risk Manager • Cost Consultant • Sustainability Analyst • Procurement Specialist • Supply Chain Manager • Commercial Manager

Testimonial



Hannah Faustina Yapp

*Class of 2020
BIM Coordinator
at Obayashi Singapore Pte Ltd.*

Studying at Heriot-Watt University has actually opened many doors for me into the construction industry. I started my career as a quantity surveyor for a year, then transitioned into a Building Information Modelling Engineer (BIM) role in Malaysia before advancing my career in Hong Kong. I truly believe that my time at the University was a key step in shaping who I am today because it has provided me with a global perspective that enhances my work in diverse international environments. My Go Global experience in Edinburgh was eye-opening, studying abroad and meeting people from different backgrounds was incredible and I also got to travel around Europe during my semester breaks which was amazing. The Programme which has a great reputation and accreditation offers a global perspective which prepares you for diverse career paths and boost job prospects.

MSc Petroleum Engineering

KPT/JPS (R2/0711/7/0001) (MQA/FA3474) 06/28



Intake: January, September

Petroleum Engineering at Heriot-Watt University is ranked 8th in the World and 2nd in the UK (QS World University Rankings, 2026).

The MSc in Petroleum Engineering is a programme of lectures and project work, encompassing a wide range of petroleum engineering fundamentals, pertinent to the modern petroleum industry. Project work provides an opportunity for ideas and methods, assimilated through lectures and tutorials, to be applied to real field evaluation and development design problems.

The courses are applied in nature and have been designed so that a graduate is technically well prepared for, and has a sound knowledge of, the industry into which he or she will be recruited.

These courses provide specialist education tailored to the requirements of the upstream petroleum industry. The relevance of this education combined with careful selection of candidates has encouraged oil and oilfield service companies to target Heriot-Watt for recruitment of graduates over the years.

Accreditation

This programme is accredited by the Malaysian Qualifications Agency (MQA).

Courses

- Geoscience for Petroleum Engineering
- Reservoir Engineering
- Drilling Engineering
- Formation Evaluation
- Petroleum Economics
- Production Technology
- Reservoir Simulation
- Reservoir Engineering - Well Test Analysis
- Field Development Project
- Individual Project

Testimonial



Felicity Valerie Karim

*Class of 2025
Reservoir Engineer
at PETRONAS Carigali Sdn Bhd*

My most memorable moments at Heriot-Watt University Malaysia were the time spent with my classmates, not only in class but also sharing meals, camping in the postgraduate common room, completing coursework, preparing for final exams, and doing casual activities together. After a few years of working, I decided to take a career break to strengthen my fundamentals, which is why I chose this programme. The programme connected me with classmates from different countries and helped me grow on a personal level and in my professional development, allowing me to contribute better to my organisation.

About Our Go Global

At Heriot-Watt University, the world is your classroom. Immerse yourself in a truly international learning experience with students from diverse backgrounds. Unlock the world's possibilities through our seamless inter-campus transfer programme to the **Edinburgh** or **Dubai campuses** and enjoy a **20% discount***.

** Subject to the degree programme running at your chosen campus.*

20%

tuition fee discount
when you transfer
to our **Edinburgh**
or **Dubai campuses**

99%

of **Go Global**
students said
they would
recommend it

Heriot-Watt University
Student Survey 2020

80%

of surveyed
employers actively
seek out graduates
with international
experience

QS Global Employer
Survey Report



HOW TO APPLY

**Heriot-Watt University Malaysia
accepts applications all year round.**

APPLY ONLINE

You can apply online for our programmes at <https://bit.ly/HWApply>. You must create an account to use the online application form. You don't have to complete the application in one session; you can save the information you have already entered and return to complete it at a later date. There is a help facility on each page of the online form.

SUPPORTING DOCUMENTS

Please remember to upload supporting documents to help us make a decision on your application. This includes proof of English language proficiency and original or certified copies of academic transcripts.

Please refer to the supplemental item checklist on the Online Application form:

► <http://bit.ly/hwumaccount>

See website for details of fees:

► http://bit.ly/hwum_fees



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www.hw.edu.my

Open for consultation:

Weekdays 9am - 5pm

Weekends by appointment

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*The information in this brochure was correct at the time of publication (Oct 2026).
Heriot-Watt University Malaysia reserves the right to alter the information should the need arise.*

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CHOICE 2026